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# The effect of psychological factors on morality. the role of culture and moral foundations.

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**The effect of psychological factors on morality. The role of culture  
and moral foundations.**

by

**Azizah Muslat Alqahtani**

A thesis submitted to Plymouth University  
in partial fulfilment of the degree of

**DOCTOR OF PHILOSOPHY**

School of Psychology  
Faculty of Health and Human Sciences

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### **Author's declaration**

At no time during the registration for the degree of Doctor Philosophy has the author been registered for any other University award without prior agreement of the Graduate Sub-Committee.

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Azizah Muslat Alqahtani

The effect of psychological factors on morality. The role of culture and moral foundations.

### **Abstract**

The main aim of this PhD research was to explore the cultural differences in moral judgment, moral behaviour, moral identity, and cultural values between Saudi Arabia and United Kingdom. Furthermore, I was interested in the psychological factors affecting morality in those two cultures.

The first study aimed to achieve the following objectives: to understand people's moral judgment in Saudi Arabia and the UK, to investigate whether and how personality traits and cultural values affect moral judgment in five moral foundations (harm avoidance, justice, ingroup, authority, purity), and to investigate whether personality traits and cultural values are related differently or similarly across Saudi and UK cultures. The findings of the study revealed that Saudi and British participants differed with regard to their foundation-specific moral judgments. Saudi participants were more likely to endorse moral foundations in the domains of intergroup relations, authority, and purity. However, there were no cross-cultural differences in the domains of harm avoidance and justice. Moreover, the results showed that the effect of personality traits and cultural values on morality varied. Harm and fairness foundations were predicted by personality traits while ingroup, authority, purity foundations were predicted by values.

The second study investigated whether foundation-related moral behaviour was affected by moral judgment and people's moral identity in a cross-cultural context comparing adults from the UK and Saudi Arabia. Findings of this study resulted in no cross-cultural differences between the two samples concerning moral judgment in the care and justice foundations. Furthermore, no cultural differences were found between the two samples concerning moral behaviour in the five foundations. In addition, moral identity mediated the relationship between moral judgment and allocations in the dictator game.

The third study investigated the relationship between (dis-) honest behaviour, moral judgment and moral identity in two different cultures, namely Saudi Arabia and the UK. It has been found that there are no statistically significant differences in honest behaviour between Saudi Arabia and the UK. Furthermore, deception was not predicted or correlated significantly with any of the five foundation-specific moral judgments across both cultural samples. However, culture moderated the relationship between deception and moral judgment in harm and authority moral foundations. Additionally, moral sensitivity did not mediate the relationship between moral judgments and dishonesty.

The fourth study explored the link between moral foundation violations (harm, justice, ingroup, authority, and purity) and anger, disgust, sadness, apathy, guilt, contempt, shame, resentment, and embarrassment emotions. Findings showed that the violations of harm, and justice foundations triggered anger and Violations of purity foundation triggered disgust. The results show no cultural differences in the assignments of the violations made by both samples. Saudi and UK participants' classifications were in agreement with the original classifications of the 40 violations by Graham et al. (2009). However, we found cross-cultural differences in the relationship between emotions and moral foundation violations.



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## **CHAPTER 1: INTRODUCTION**

Humans are a social species, and social relationships and interactions matter to us from the first minutes of our lives. Many of our social interactions and relationships are governed by rules of what can and cannot be done within them, and many of those rules and norms acquire a moral status. Morality has been described as “interlocking sets of values, virtues, norms, practices, identities, institutions, technologies, and evolved psychological mechanism that work together to suppress or regulate selfishness and make social life possible.” (Haidt & Kesebir, 2010, p. 800). While certain aspects of morality, like human social relationships, are likely to be universal across cultures, other aspects of morality might differ across societies. The goal of this PhD research is to investigate whether morality differs in Saudi Arabia and the United Kingdom. Furthermore, I am interested in the psychological factors affecting morality in those two cultures. I will particularly focus on the role of personality, values, moral identity, and emotions for individuals’ moral judgments and moral behaviour. This first chapter will first review major theories on morality and moral development as well as cross-cultural research on these topics.

### **1.1 Morality**

At least in western society, morally acceptable behaviours are those that do not violate other people’s rights (Locke, 1960). However, some actions might still be considered as immoral even though they might not cause harm or a violation of individuals’ rights. This conflict draws the attention to the boundaries of what constitutes morality. The moral domain can be defined as the domain that contains the rules that adjust the individual’s or others’ rights or welfare such as justice towards others (Bukatko & Daehler, 1998) and to give behaviour guidelines (Royal & Baker, 2005). In principle, moral ideas extend to cover social, religious, and political fields.

According to Kochanska and Aksan (2006), morality contains three different interrelated components: moral reasoning (cognition), moral emotions (affect), and moral conduct (behavioural). Psychological theories of morality and moral development differ in the way they emphasize, describe, and explain these different components of morality.

**Learning theories.** Learning theories see morality as a process of gradual development of suitable behaviours and conformity with the rules of society (Aronfreed, 1976). These theories conceptualize morality as the child's learning of and compliance with socially defined morally acceptable behaviour (Aronfreed, 1976). Based on learning theory, parents' and others' rewards and punishments, and the actions and verbalizations of others solely form the child's (moral) conduct (Bukatko & Daehler, 2004). Various factors affect children's disposition to transgress (i.e., showing of immoral behaviour), for example when left alone in a room with forbidden toy after punishment. First, as predicted by learning theory, the timing of punishment affects children's behaviour. If it closely follows the undesirable behaviour, then punishment will be effective. Second, giving a verbal clarification of why an action is forbidden affects immoral behaviour. For example, if parents tell children that the forbidden toy might fall to pieces if it is held, children's transgression is less frequent. According to learning theorists, verbalizations smooth the internalization of morally acceptable and unacceptable actions (Aronfreed, 1976). Listening to and watching other people are important in learning new behaviours (Bukatko & Daehler, 2004).

Bandura's (1986) social learning theory (1986) gives a large role to cognitive processes in the emergence of moral values. Social learning theorists see children as encoding and processing observations and choosing whether and when to act on certain observed behaviours based on cognitive skills and motivational factors. Based on this view, children evolve internalised conduct criteria and cognitive moral representations from the observation of others

and use them in moral behaviour explanation process. Therefore, children tend to behave in consistent ways with their representations and observations (Grusec & Goodnow, 1994). For example, a child is more likely to remove harmful objects from the street if s/he sees his/her father do it for several times.

According to Bandura (1965), language, social and moral customs cannot be transmitted to next generations through operant and classical conditioning. Bandura (1965) believed that important learning happens through observing and imitating another person, a model. In this case, moral behaviours are learned as any other behaviour is (Bukatko & Daehler, 1998). Parents and models can affect whether a child engages in (moral) transgressions or not. Children who observe a model carry out a forbidden behaviour are more likely to carry out the same behaviour themselves, while children observing a model that fights forbidden behaviour will commit fewer transgressions (Rosenkoetter, 1973).

**Kohlberg's cognitive-developmental theory of morality.** Lawrence Kohlberg's (1969, 1971) ideas were dominant for a long time in research on moral development. Kohlberg's theory is one of the cognitive-developmental explanations of moral development which focus on the ways children reason about moral problems. Both Piaget and Kohlberg have developed stage theories that show different reasoning about moral issues depending on the level of moral development (Bukato & Daehler, 2004). Piaget's (1932) original idea about moral development were developed by observing and asking children about the rules of games and presenting children with moral situations to assess their thinking about ethical problems.

Kohlberg (1976) developed his stage theory of moral development based on Piaget's (1932) work and developed six stages of moral reasoning which are supposed to drives moral judgment (Greene & Haidt, 2002). Kohlberg developed his well-known theory of moral development by interviewing 72 boys in Chicago. The boys were aged between 10 and 16 years

old and were interviewed several times (longitudinal study). He presented these children with a selection of dilemmas. According to Kohlberg (1963), a moral dilemma is a situation in which two moral norms are in conflict with each other so that there is no completely (morally) right answer. An example of such a moral dilemma is the Heinz dilemma:

“In Europe, a woman was near death from a special kind of cancer. There was one drug that the doctors thought might save her. It was a form of radium that a druggist in the same town had recently discovered. The drug was expensive to make, but the druggist was charging ten times what the drug cost him to make. He paid \$200 for the radium and charged \$2,000 for a small dose of the drug. The sick woman's husband, Heinz, went to everyone he knew to borrow the money, but he could only get together about \$ 1,000 which is half of what it cost. He told the druggist that his wife was dying and asked him to sell it cheaper or let him pay later. But the druggist said: "No, I discovered the drug and I'm going to make money from it." So Heinz got desperate and broke into the man's store to steal the drug-for his wife. Should the husband have done that? ” (Kohlberg, 1963, p. 19).

Kohlberg developed his theory based on the reasons that his participants brought forward in reaction to these moral dilemmas. Kohlberg (1976) conceptualized three levels of moral development, and each level contains two sub stages. At the preconventional level, external pressures such as punishment and reward and simple exchanges of favours affect the child's moral reasoning. That is, children regard those actions as morally right that do not lead to punishment or that lead to a favourable exchange of favours between two actors. At the conventional level, children and adolescents regard conformity with norms (either norms regulating close relationships or norms regulating behaviour at a societal level) as morally right.

At the postconventional level, people regard moral rules as independent from and prior to societal arrangements. Morality should be based on social contract considerations or the acknowledgement of universal human rights.

According to Kohlberg (1976), individuals move from stage to stage in a universal order. Several investigations of Kohlberg's theory have affirmed stage transition in moral reasoning (Bukato & Daehler, 2004). In one longitudinal study following children and adults over a twenty-year period, modifications in responses to moral dilemmas is similar to stage-like advancement designed by Kohlberg (Colby et al., 1983). Kohlberg (1976) assumed that there are differences in the content of moral beliefs between cultures but the development of their form is a culturally invariant. The stages of development in his theory symbolize culturally invariant sequences in people's notions about themselves and their social world (Peters, 1981).

**Domain theory of morality.** Social domain theory (Turiel, 1983) is another social-cognitive theory of moral development. It draws on the fact that definitions of morality are usually rooted within the field of social systems and values of each culture. Consequently, moral and societal beliefs are often differentiated. The moral domain contains rules protecting and regulating individuals or others' rights or welfare. The societal domain is related to the knowledge of social conventions, the rules that control social interactions, such as appropriate type of clothes, which can vary from culture to another. A third domain, the personal domain governs personal decisions and choices, such as who to become friends with (Bukato & Daehler, 2004).

Domain theory (Helwig & Turiel, 2003; Nucci, 2001, 2002; Smetana, 1995; Turiel, 1998, 2002) regards morality as one of the aspects of children's developing social knowledge. Moral domain theory has focused mostly on children's ability to differentiate morality from social convention (Smetana, 2006). Turiel and his colleagues (1978, 1983, and 1987) tested whether

children differentiate what is moral and what is not. They presented children with questions such as “is it Ok to wear pyjamas to school?” or “Is it okay to hit another person?” Based on children’s answers, Turiel and his colleagues summarized three types of rules that children and adults can distinguish: moral, conventional, and personal. Moral rules are defined as rules that apply to everyone, that are unchangeable, and are based on the moral values of avoiding harm and upholding justice. Conventional rules are defined as rules that apply to specific groups, can be changed, and are based on agreed norms. Personal rules are defined as rules that apply to individuals, can be changed, and are based on a person’s preferences. Killen, McGlothlin, and Lee-Kim (2002) concluded from the findings of more than 100 studies that children from as early as three years (Smetana & Braeges, 1990) differentiate moral from social-conventional rules. Children tend to make this distinction because of the greater negative emotions that come with moral transgression. When a child sees his classmate was slapped by another classmate, this abuse might arouse negative emotions in him (Buktako & Daehler, 2004).

Turiel’s (1983) domain theory of morality is another universalist theory of moral psychology and development, as it assumes that the distinction between moral and social conventional rules and violations is universal. Indeed, cross-cultural studies have found that children from around the world differentiate between morality and social conventions (Matsumoto & Juang, 2013). Children from around the world agree that certain actions, such as stealing from others, are immoral. On the other hand, there are also cross-cultural differences in what is considered moral or immoral. For example, in Korea, children consider not giving up your seat to an elderly person as immoral behaviour (Song, Smetana, & Kim, 1987) but American children considered this as a social convention.

**Moral reasoning, moral judgment, moral behaviour.** Cognitive-developmental theories, such as Kohlberg’s theory on the development of moral reasoning and Turiel’s domain

theory have received a lot of criticism over the years. One main critique is whether moral judgment and moral behaviour are based on cognitive factors, such as moral reasoning, or emotional factors. According to Kohlberg (1984), moral reasoning is considered to be the main component of moral judgment. Generally defined, moral reasoning can be seen as a systematic and considered approach that enables individuals to make moral decisions. Moral reasoning process has three steps, first step is the definition of the situation, second step is the analysis of the situation, and third step is taking the decision (Lyons, 1983). Moral reasoning includes the justifications produced for and during moral action (Smetana, 1999; Royal & Baker, 2005). Nevertheless, more recent evidence concludes that moral judgments are (also) emotional in nature (Greene & Haidt, 2002). This debate is still ongoing. In sum, although moral judgments could be related to emotional responses, they do not necessarily have to involve emotional responses (Prinz, 2006).

Relatedly, another criticism of cognitive-developmental theories of morality is that moral reasoning (or reasoning-based moral judgment) is only moderately related to moral behaviour. Research has found that scores on tests measuring moral reasoning and moral judgment are not usually correlated with inclinations to behave in moral way such as helping others or following the rules (Richards et al., 1992). While Kohlberg and Candee (1984) assumed that a moral action is one that is motivated by a moral reason and thus that higher level moral reasoning is correlated with more moral behaviour, results on the relationship between moral reasoning level and moral behaviour are mixed. On the one hand, a negative correlation between moral reasoning and delinquency has been found. However, there are only moderate correlations between moral reasoning and moral behaviour (Blasi, 1980; Gregg, Gibbs, & Basinger, 1994). This suggests that moral behaviour might be motivated by factors other than moral reasoning ability.

Other research traditions have particularly focused on prosocial behaviours as particular forms of moral behaviour. In that sense, moral behaviour can be defined as concerns for others and reliable actions linked to keeping promises, altruism commitment, and helping strangers in need (Georges & Grypdonck, 2002). According to Kochanska and Askan (2006), moral conduct is the behavioural element of morality and includes two parts. First part is the engagement in helping behaviour and second part is the suppression of antisocial behaviour engagement such as lying (Koenig, Cicchetti, & Rogosch, 2004). Such moral behaviours occur early in life (at least in the second year of life, see Warneken, 2015) and might be driven by different cognitive and emotional factors.

Haidt (2001, 2007) suggests that moral psychology, and moral behaviour particularly, is based on two constructs: moral intuition and moral reasoning. Moral intuition is the emotional judgment of the moral goodness or badness of another's actions that surfaces in consciousness without any realization of taking steps of search, weighing evidence, or drawing a conclusion. Moral reasoning, on the other hand, is a process that includes conscious mental activity that transforms information about individuals and their actions into a moral judgment.

In contrast to cognitive theories of morality and moral development, Haidt (2001) assumes that individual moral judgment and moral behaviour is not based on moral reasoning. Rather, moral reasoning is employed to find evidence to support a fast, intuition-based moral judgment and moral behaviour. A number of studies support this assertion. Individuals have immediate implicit reactions to moral violation stories (Haidt, 2001). Emotional reactions, like anger or guilt, can predict moral judgments and behaviours (Haidt, 2001). Neurological and behavioural data support the idea that those emotions are essential for moral judgment. For example, Huebner et al. (2009) proposed that moral judgment is moderated by a fast, unconscious process that works over causal-intentional representations. People can sometimes



know that something is not right without having the ability to explain why something is wrong (Haidt, 2001). Thus, there is reason to believe that moral reasoning is but one, and probably not even the strongest, factors influencing people's moral judgments and behaviours.

**Summary.** The previous sections discussed the concept of morality and different theories that affected and shaped the concept and its development. The sections started by explaining the Learning theories and its role in defining and developing morality. It discussed the work of Bandura's social learning theory (1986) which gave a large role to cognitive processes in the emergence of moral values. The next section analysed Kohlberg's cognitive-developmental theory of morality which is one of the cognitive-developmental explanations of moral development that focuses on the ways children reason about moral problems. Additionally, domain theory of morality was reviewed as another social-cognitive theory of moral development and its definitions of morality as rooted within the field of social systems and values of each culture. Finally, I discussed moral reasoning, moral judgment, moral behaviour and shed light on the critiques for cognitive-developmental theories. It also demonstrated the work of Haidt (2001) in contrast to cognitive theories of morality and moral development.

## 1.2 Culture

One main goal of the present research was to investigate morality in a cross-cultural context, comparing participants from Saudi Arabia and the United Kingdom (UK). In the following sections, I will review approaches to studying culture in psychology with a particular focus on the individualism-collectivism dimension. I will then focus on (cross-cultural) research conducted in a Middle Eastern context specifically.

**Studying culture in psychology.** Culture has been defined in various ways. A simple definition by Kluckhohn (1954) states “culture is to society what memory is to individuals” (Triandis & Suh, 2002, p. 3). A recent definition by Hong (2009, p. 4) conceptualized culture as “network of knowledge, consisting of learned routines of thinking, feeling, and interacting with other people, as well as a corpus of substantive assertions and ideas about aspects of the world”. There are two approaches to studying culture in psychology: cross-cultural psychology and cultural psychology. This thesis mainly follows the tenets, aims, and methods of cross-cultural psychology.

Cross-cultural psychology studies the effect of culture on human behaviour. According to Berry et al. (2002) cross-cultural psychology has three goals. The first goal is a generalization of existing knowledge and theories in psychology developed in western societies to non-western cultures (Whiting, 1968). The second goal is discovering cultural and psychological differences between cultures (Berry & Dasen, 1974). The third goal is to gather and merge the findings gained by exploring the first two goals (Berry et al., 2002).

According to Van De Vijver and Leung (1997), cross-cultural psychology relies on culture-comparative studies. In this type of studies the researcher applies measures in different cultures to survey similarities and differences. In another type of cross-cultural study researchers focus on generalizability and investigate whether results gained in one culture can be replicated in another. Finally, there are theory-driven cross-cultural studies where the studied theoretical framework includes explanatory variables. This type of studies will progress the field of cross-cultural psychology (Van De Vijver and Leung, 1997).

Given that cross-cultural studies compare the behaviour of people from at least two different cultures, the question emerges on what dimensions cultures can be compared. In this research, I will draw on the individualism-collectivism dimension to assess cultural differences.

This is based on the work of Hofstede (1980). He derived his theory about cultural dimensions from his project with a multinational business corporation in 40 nations with responses over 70,000 employees. Hofstede derived four culture dimensions: Power distance, Masculinity versus femininity, uncertainty avoidance, and individualism versus collectivism. The latter has been used most often as an explanatory variable in cross-cultural research (Triandis, 1990).

The individualism-collectivism cultural dimension seems to be the most significant cultural difference among cultures (Triandis, 2001). Greenfield (2000) defined it as the “the deep structure” of cultural differences. The primary issue addressed by this dimension is the relation between a person and his or her fellow persons. In individualist societies, the ties between individuals are loose. A person is supposed to take care of his or her own self-interest and maybe the interest of his or her immediate family. In collectivist societies, the ties between individuals are tight. A person is supposed to take care of the interest of his or her ingroup and to have the opinions and beliefs that serve the benefits of their ingroup. In turn, the ingroup will take care of the individual when he is in trouble (Hofstede, 1983). However, it should not be assumed that everyone in collectivist cultures has all the characteristics of these cultures and that everyone in individualist cultures has the characteristics of those cultures. Rather, people from individualist cultures are more likely to score high on individualism (also called idiocentrism), whereas people from collectivist cultures are more likely to score high on collectivism (also called allocentrism).

Triandis (1995) proposed further attributes for individualism and collectivism constructs. In collectivistic cultures, individuals see themselves as interdependent with one or more groups, while in individualistic cultures, individuals see themselves as independence of the group (Markus and Kitayama, 1991). In collectivistic cultures, group goals have priority over personal goals, while in individualistic cultures, personal goals have priority over group goals. In

collectivistic cultures, norms, obligations, and duties related to interdependence, duties and group goals, security, and group harmony lead individual's behaviour. However, in individualistic cultures attitudes, personal needs, individual rights related to personal goals, achievements, freedom and autonomy lead individual's behaviour. In collectivistic cultures, individuals would have to stick to troublesome groups or relationships, while in individualistic cultures individuals would quit undesirable groups or relationships.

Kim et al. (1994), Triandis (1995) and Hofstede (2001) assumed that individualism and collectivism are not only related to culture differentiation but also to social systems, morality, religion, cognitive functions, and economic evolution. Triandis (1994) recognized four major criteria that differentiate collectivism from individualism. Collectivistic individuals would characterize themselves with regard to their relationships with in-groups, their achievement concerns in-groups' goals, follow social laws and react emotionally. In contrast, individualists would recognize themselves as followers to their own individual goals, their preferences, and they evaluate their profits and losses before making an action.

**Cultural orientations in Saudi Arabia.** As indicated earlier, this PhD project is based on cross-cultural studies that compared morality and some of its underlying factors in adults from the UK and Saudi Arabia. Therefore, an introduction to Saudi culture is warranted. In Saudi Arabia, like any other Arabic country, religion plays significant role in forming Saudi culture. The only religion in Saudi Arabia is Islam. The rule in Saudi Arabia is based on justice, consultation and equality in accordance with Islamic law. The rule in Saudi Arabia derives its authority from Quran and the tradition of prophet Mohammed and they govern the systems of Saudi Arabia (MOFA, 2005, 2017). In this case, Islam as a religion directs individuals' behaviour and mostly every part of Saudi life. However, Saudi society and Islam can and should be distinguished from each other.

Table 1.1 presents the country score of Saudi Arabia on Hofstede's five cultural dimensions, masculinity-femininity, uncertainty avoidance, individualism-collectivism, and power distance. According to Hofstede (1991) Saudi Arabia is considered collectivist culture (with a score of 25 on his individualism-collectivism scale from values survey module by Hofstede and Minkov (2013). The index has a range of about 100 points between strongly collectivist and strongly individualist countries, scores less than 50 are considered individualistic. This indicates strong commitment to group members, such as (extended) family. This culture promotes strong relationships where everyone is responsible for other group members. Loyalty in a collectivist culture is essential. In this society everyone takes responsibility for group members. In collectivist societies offence would cause shame, and employer/employee relationships are recognized in moral terms (like a family link) (Hofstede website, 2017). The society structure depends on families. Families in Saudi Arabia are a strong source in developing individual's identity, personality, values, and behaviour.

Table 1.1 Saudi Arabia country score on five cultural dimensions

Cultural dimension	Hofstede index in Saudi Arabia	At-twajiri and Al-Muhaiza (1996) index in Saudi Arabia
Masculinity-Femininity	60	53
Uncertainty avoidance	80	88
Individualism - collectivism	25	41
Power distance	95	61

Saudi Arabia scored 95 on power distance index which means that people accept a hierarchical system in society and inequalities between people. Saudi Arabia scored 60 on the

masculinity index and is thus assumed to be a masculine society. That is, people live to work, managers are expected to be firm; equity, competition and performance are encouraged in work setting. Saudi Arabia scored 80 on uncertainty avoidance and prefers avoiding uncertainty. Countries high in uncertainty avoidance maintain strict belief and behaviour and are intolerant of unusual behaviour and ideas. Security is crucial component in people's motivation.

At-twaijri and Al-Muhaiza (1996) examined Hofstede's cultural dimensions in Saudi Arabia. Overall, their findings are similar to those reported by Hofstede (1991). Based on the results of their study, Saudi Arabia is a culture high in masculinity, power distance, collectivism, and uncertainty avoidance (see Table 1.1).

**Summary.** The previous sections discussed approaches to studying culture in psychology with a particular focus on the individualism-collectivism dimension. The first section started by studying culture in psychology and by reviewing definitions of culture through previous studies. It, then, discussed Cross-cultural psychology studies the effect of culture on human behaviour by reviewing the work of Berry et al. (2002) and Van De Vijver and Leung (1997). Hence, the section drew on the individualism-collectivism dimension to assess cultural differences based on the work of Hofstede (1980). The second section focused on Cultural orientations in Saudi Arabia. It started by introducing the culture of Saudi Arabia and presenting the country score of Saudi Arabia on Hofstede's five cultural dimensions. Then, it reviewed Saudi studies on the country score of Saudi Arabia on Hofstede's five cultural dimensions.

### **1.3. Morality and culture**

Morality and culture are connected. Moral principles and ethics give guidelines for people's behaviours in terms of what is acceptable and what is not (Matsumoto & Juang, 2013).

These guidelines are results of a certain culture and society. Furthermore, morality is often the basis for laws to formalize instruction for acceptable and unacceptable behaviours and punishments. Consequently, culture may also influence the law of a society. That is why morality holds a significant place in our understanding of cultural and individual differences (Matsumoto & Juang, 2013).

Culture has been treated as a significant part of morality (Narvaez, Getz, Rest, & Thoma, 1999). Broadly speaking, there are two approaches to culture in moral psychology, universalism and relativism. Universalist theories, such as those by Piaget (1977) and Kohlberg (1981, 1984), proposed that stages of moral development held across cultures. This research has focused on the development of morality and the process of reasoning and moral judgment (Miller, 2001) and whether the same developing sequence can be found across cultures (Kohlberg, 1981; Piaget, 1977). Relativists proposed that a rights- and justice-based moral code that underlies especially Kohlberg's theory might be more typical for western cultures, but does not represent the whole moral domain (Chiu, Dweck, Tong, & Fu, 1997; Shweder, Much, Mahapatra, & Park, 1997). Thus, moral principles are relative to the culture they are part of (Harman, 1975; Shweder, 1990).

Psychological research points both towards universalist and relativistic interpretations of morality. Despite the fact that morality is a universal concept across cultures, research has shown significant differences in moral judgment and reasoning across cultures (Miller & Bersoff, 1992; Rozin, Lowery, Imada, & Haidt, 1999). Miller and Bersoff (1992) studied the moral reasoning of American and Indian adults and children by presenting moral dilemmas containing conflicts between interpersonal and justice expectations. The American and Indian cultural groups were chosen as their cultural beliefs and values were expected to be different to the degree that affects their moral views of interpersonal responsibilities (Miller & Luthar, 1989; Miller et al., 1990). It

was expected that the American sample would consider interpersonal responsibilities as personal-moral or personal choice issues whereas Indian sample would consider interpersonal responsibilities as entirely moral issues. The majority of Indian participants gave preference to interpersonal expectations, while the majority of American participants gave preference to the justice expectations. Results indicated that Indians do hold a postconventional moral code, but this postconventional moral code was based on affiliation and caring, not just justice concerns. The Indian participants considered not helping others as a moral transgression more than did the American participants. According to the authors, these cultural differences occurred because of differences in valuing affiliation and justice in India and the USA (see also Matsumoto & Juang, 2013).

One of the main assumptions in Kohlberg's (1981) theory of moral development is the cultural universality of the stage sequence. Turiel, Edwards, and Kohlberg (1978) studied the development of moral judgment of three social groups of Turkish children, adolescents and young adults. Participants were presented with moral dilemmas and their responses were coded for stage of moral development. The findings supported the assumption that moral judgment development proceeds according to the stage sequence proposed by Kohlberg. Results showed similarities between the three Turkish groups and other western and non-western samples in previous study. In other words, the moral judgments of Turkish participants conformed with the stage definitions and stage order developed in western samples. However, there were differences in average and range of development between the three social groups in Turkey. The biggest difference in mean stage development was between the village and urban subjects. For example, at age 16, the village participants had not yet reached stage 3 or 4 of moral development compared to the urban groups. Thus, cultural background does not seem to affect stage sequence in moral development, but the speed of the development through the stages.



Snarey (1985) examined the universality claim in Kohlberg's theory by reviewing forty-five cross-cultural studies, 38 cross-sectional and 7 longitudinal studies performed in 27 countries. In terms of cultural diversity, Kohlberg's model and method were deemed satisfactory. Kohlberg's interview was considered as culture fair interview when the content adaptation was perfect and the language of the interview matched that of the subject. The assumption of stage development being invariant in sequence was well supported as stage skipping and stage regression were exceptional. Both cross-sectional and longitudinal findings indicated the presence of stage 1 to stage 4 across cultures. However, the presence of stage 5 was uncommon across cultural groups and middle-class populations. One possible explanation is that the higher stages are defined as culture-bound and ethnocentric. Bergling (1981) and Edwards (1981) stated that the higher stages 5 and 6 (postconventional level) were not universal. Recently, Gibbs, Basinger, Grime, and Snarey (2007) reviewed 75 cross-cultural studies in 23 countries and concluded that Kohlberg's first two stages might be universal.

Cross-cultural studies from twenty different countries around the world have found that children exhibit universal moral development from the preconventional to the conventional levels, but that there are cross-cultural differences concerning the development of a postconventional morality (Gibbs et al., 2007; Jensen, 1998, 2011). A study by Ma and Cheung (1996) tested the structure of moral stages in China, England, and USA. They revealed that the stage structure of moral judgment in the Chinese, English, and American samples were similar. The results of the analysis showed that there were significant cultural differences in interpreting stage 4 issue statements. Moreover, the results showed that the Chinese sample tended to consider the stage 4 statements as more comparable to the stage 5 ones, whereas Americans and English tend to consider the stage 4 statements as more comparable to the stage 3 ones.

One of the criticisms (Buktato & Daehler, 2004) aimed at Kohlberg's theory is the absence of measurement of values found in other cultures. Kohlberg's cognitive-developmental theory does not allow for cultural values to be expressed and is, in fact, not interested in measuring (culture-specific) values. This is because Kohlberg is interested in the structure of moral development (i.e., the transformations of thinking and reasoning, represented by the moral stages), not its content (i.e., specific values). But to understand the development of moral reasoning more fully, researchers also need to understand the values of different cultures. For example, Hindu beliefs value the life of all life not just human beings and eating beef or fish is considered moral transgression by orthodox Hindu people. These types of concepts are not captured by Kohlberg's moral development theory (Buktato & Daehler, 2004). Indeed, some cross-cultural research has shown that values or content of morality can influence the structure. For example, people from Asian cultures respond differently to those from western cultures to moral dilemmas because Asian societies emphasize a harmonious social order (Dien, 1982). Overall, mature morality as visualised by Kohlberg might be a western phenomenon and might be based on a specific understanding of morality and moral values.

An and Trafimow (2014) conducted three experimental studies to understand the differences of trait attributions of moral behaviours between Koreans and Americans. In experiment 1, the researchers explored how moral attributions work in the United States and Korea. In experiment 2, the researchers investigated the role of emotions in making moral attributions by Americans and Koreans. In experiment 3, the researchers manipulated participant's emotion to check alternative explanations for the results of experiment 2. The results showed differences in moral attribution process between Koreans and Americans. Koreans did not attribute moral violations in the same way as Americans. There are two reasons for this difference. First, it might be that Koreans do not use action or negative impact from

moral violation as information to produce moral attributions. Second, Americans and Koreans might have different moral values. Experiment 2 results indicates that Korean showed a similar degree of negative affect to Americans but negative affect was not used to make moral attributions by Korean. Negative affect might be irrelevant for moral attributions in Korea. Alternatively, Koreans may not engage in moral attributions until collecting enough information rather than just relying on negative affect. The results of Experiment 3 indicated that more duty violations were necessary to overturn a previous positive impression in Korea than in the US, indicating that (negative) affect alone might not be enough for Koreans to make a moral attribution.

Research has not just examined cross-cultural differences and similarity in morality following the Kohlberg tradition, but also with respect to domain theory of morality. While a plethora of studies have found similar differentiations between morality and social conventions in different cultures as proposed by domain theory (see Helwig, 2006; Wainryb, 2006), other research indicates that the differentiation between morality and social conventions might not be as universal as suggested by domain theory. Research comparing adults and children from India and the USA (Shweder, Mahapatra, & Miller, 1987) and Brazil and the USA (Haidt et al., 1993) indicated that the moral domain is defined much broader in India and Brazil and includes concerns beyond harm and fairness, such as concerns about spiritual purity and degradation and moral expectations of loyalty to the people of one's ingroups. For example, Haidt et al.'s (1993) research was aimed at finding non-harm based morality in US and Brazil by presenting adult and child participants with affective stories with disrespectful or disgusting actions that "feel" wrong but are harmless. The result showed that Americans with high socioeconomic status did not consider disgusting and disrespectful acts as immoral actions if they did not cause harm to others. However, in low socioeconomic status groups, particularly in Brazil, disgusting and

disrespectful actions were considered immoral even if they did not cause harms to others. Thus, actions and rules that would be regarded as social conventional or personal choices by western participants become “moralized” in India and Brazil. In contrast, there are very few violations that are regarded as purely social conventional in India (Shweder et al., 1987).

**Three ethics approach to moral reasoning and moral foundation theory.** The research summarized above suggests that there are cross-cultural similarities and differences in how morality and the moral domain are conceptualized. Various studies have shown that (specific) cultural values predict moral reasoning and judgment (Miller & Bersoff, 1992; Narvaez et al., 1999). Shah (2004) found that religiosity has a strong influence on moral behaviours of teenagers. Shweder et al. (1997) found that moral judgments by Indian participants rely on tough social rules to be universally applied and are based on social and religious rules. However, in the USA moral judgments might rely on more liberal social rules, based on individual rights, justice, and avoiding harm. The findings of these cross-cultural studies led to the development of a moral taxonomy called “the big three” (Shweder et al., 1997, p.119). Three types of ethics/moralities were proposed which can exist at the same time in the same culture but with different level of emphasis.

The three ethics are the ethics of autonomy, community, and divinity (Rozin et al., 1999). The ethics of autonomy considers the individual as the source of moral authority. It is based on individuals’ rights to follow their needs and on fairness and justice (Haidt, Koller, & Dias, 1993). The most important moral concepts in the ethics of autonomy are equality of rights between individuals, independence, freedom of choice, and personal well-being (Jensen, 2004). Rozin et al. (1999) suggest that the ethics of autonomy is the predominant ethics in western societies, such as the USA or the UK. The ethics of community relies on loyalty, duty, honour, respect, self-control, obedience to authority, and actions consistent with one’s own social roles. Individuals

are seen as having social responsibilities in families or nations, and interpersonal responsibilities are considered a moral duty (Miller, 2001; Shweder, 2003). According to Rozin et al. (1999) the ethics of community is common in cultures like Japan. The ethics of divinity defines individuals as spiritual entities. The central values are based on the concepts of divine or natural law which is based on religious authorities and texts, obligation, punishments, and rewards (Arnett et al. 2001; Jensen, 1995). The ethics of divinity is most common in cultures that emphasize scriptural authority like Hindu communities (Jensen, 2011). There are differences between the religions of Islam and Hinduism, such as the absence of a prophet, sacred book, and a monotheistic god in Hinduism (Thapar, 1989). Another source of difference comes from the construct of community which can be observed more easily in Islam than Hinduism. The construct of community is built on the strong emphasis on the doctrine in Islam while the emphasis in Hinduism is on experience (Eliade, 1986). The ethics of autonomy and community arise in people's lives in early childhood and continues to take place during different life stages. The ethic of divinity arises during adolescence and adulthood in some traditions or cultures (Jensen, 2011).

Several studies have examined the use of the three ethics in India, Brazil, Japan, the Philippines, and the USA (Jensen, 1995; Rozin et al., 1999; Vasquez, Keltner, Ebenbach, & Banaszynski, 2001). Haidt et al. (1993) found differences in endorsement of the type of ethics of children and adults in the United States and Brazil. University students in both countries used the ethics of autonomy more frequently than the other two ethics. Americans used autonomy more than Brazilians among the general population, while Brazilians showed arguments based on autonomy and community.

Miller (1994) conducted research among Americans and Hindu Indians that supports the assumption that Americans develop personally directed interpersonal moral code emphasizing personal freedom of choice, individual responsibility, and duple view of person motivation. On

the other hand, an obligation-based interpersonal moral code develops among Hindu Indians, emphasizing wide and social compliant interpersonal duties, the importance of group sensitivity, and a single view of person motivation. For example, when presented with non-life-threatening violations, around 91% of the Indian adults gave priority to the interpersonal alternatives while just 46% of the American adults show this reaction.

Haidt and Graham (2007) expanded the “big three” approach to morality in their moral foundation theory. They stated that the moral domain includes more than two foundations (harm/welfare/care, and justice/ rights/fairness). Haidt (2007) states that almost every research program in moral psychology has concentrated on one of the two aspects: harm, care, and altruism or fairness, reciprocity, and justice. There is a difference between cultures in the focus in moral domains. For example, among educated westerners the focus is on harm and fairness, whereas non-western cultures regard ingroup loyalty, obedience to authority and purity matters legitimate moral concerns. Thus, the moral domain should be broadened to include these concerns. Consequently, according to Graham et al. (2009, 2011), the moral domain includes five moral concerns or foundations (see Table 1.2 for descriptions). The harm/care foundation is related to disapproval of, avoiding, and ameliorating pain and misery in others (Koleva et al., 2012). It is based on sympathy, friendliness, and nurturance (moralfoundations.org, 2016). The fairness/reciprocity foundation is related to equality and justice and seeks that these principles not be violated. The ingroup/loyalty foundation is related to our relation to groups such as our family or our country, and seeks to promote the group’s cohesion and well-being. The authority/respect foundation is related to status differences between people and within societies. Subordinates are supposed to follow authorities’ norms and rules, but authorities also have a duty to support the well-being of subordinates. The purity/sanctity foundation is related to the

emotion of disgust that is associated with biological and social contaminants (Koleva et al., 2012).

Table 1.2 The five moral foundations and their characteristics

Moral foundation	Characteristic
Harm/care	Caring, kindness, sympathy
Fairness/reciprocity	Fairness, justice, trustworthiness
Ingroup/loyalty	Loyalty, patriotism, self-sacrifice
Authority/ respect	Obedience, deference
Purity/sanctity	Temperance, chastity, piety, cleanliness

Graham and colleagues (2011) examined cross-cultural differences in moral foundations of participants from Eastern cultures such as South Asia, East Asia, and South-East Asia and participants from Western cultures such as the United States, United Kingdom, Canada, and Western Europe. Eastern participants scored higher in ingroup and purity foundations compared to Western participants. According to Graham and colleagues the differences are concentrated in ingroup and purity which is justifiable considering cultural differences in collectivism (Triandis, 1995) and the link between purity concerns and religious practice especially in South Asia (Shweder et al., 1997).

Joeckel et al. (2012) examined the link between moral foundations and decisions making in video games among German and American participants. They found that the increased moral salience led to increased probability of moral violations in both samples. German participants scored higher in harm and justice foundations and scored lower in ingroup, authority, and purity foundations. In contrast, American adolescents showed similar average scores in all five

foundations. Even though American adolescents marked harm foundation as most and purity foundation as least salient, the differences between these marking was quite small. Individuals in both cultures rated harm foundation as being the most salient foundation and purity foundation as being the least salient foundation.

Bowman and colleagues (2012) examined how elderly people's moral foundations are influencing decisions. Furthermore, this study examined cross-cultural differences in moral intuitions of US and German respondents. Participants were confronted with a computer simulation in which they could decide to violate or not violate each of five moral intuitions (harm, justice, ingroup, authority, and purity). Germans and Americans showed differences in their moral foundations. Germans showed higher salience for harm and fairness foundations, and lower scores for authority foundation. However, Americans showed an even distribution of moral concern salience across all five foundations. Across both samples, higher moral salience led to a decrease in decisions to violate moral foundations in a virtual world.

**Studies on Morality in the Middle East.** The main aim of this PhD project was to examine and compare morality and its determinants in Saudi Arabia and the UK. Very few empirical studies have been conducted on this topic, and even fewer conceptualized morality in line with moral foundation theory. Moral judgment research in the Middle East is still in its infancy. However, few studies investigated moral judgment, moral reasoning, and moral behaviour in the Middle East. Previous studies in the Middle East have considered some factors related to morality.

Gesis (2010) examined moral judgment in line with Kohlberg's social-cognitive theory among school students in Haifa city. The findings indicated the presence of stage 1 to stage 5 among students. The findings showed that children exhibit universal moral development from stage 1 to stage 5. The assumption of stage development being invariant in sequence was well



supported. Furthermore, the findings showed that gender and social economic status did not affect moral judgment.

Bouhmama (1989) examined the level of moral judgment among psychology students in Algeria, using Rest's (1973) defining issues test. The results indicated that students mostly reasoned on Stage four from Kohlberg moral development stages. Furthermore, there were differences between genders in moral development with higher scores for female students. These results contradicted by Rest's earlier studies (1976, 1979) that did not find any gender differences. Bouhmama (1984) further compared the moral judgments of 40 students from UK and Algeria. Individual interview of Kohlberg's moral dilemmas were conducted. The findings showed that there were cultural differences between the two groups in the content of their responses to the moral dilemma and moral stage levels. British participants used more stage 2 reasoning and made little use of stage 3 reasoning while Algerian participants used more stage 3 reasoning and made a little use of stage 2 reasoning. The author attributed the difference in moral reasoning to the effect of Islamic values prominent in Algerian participant's answers. The content of participant's responses to the moral dilemma was also different. Algerian participant's moral reasoning was based on religious values as they used religious concepts in their answers, while British participants did not use any religious concept in their answers. These data support the author's prediction that cultural and religious values had an impact on Kohlberg's moral stages.

Bin Ladin (2001) compared the moral judgment level of delinquent and non-delinquent students in Saudi Arabia using Rest's (1973) defining issues test. The results showed that the two groups passed all moral developmental stages. Furthermore, there are differences in stage six of

moral judgment among delinquent and non-delinquent students. Non-delinquent students scored higher than delinquent students on moral judgment scale.

Abu-Asaad and Al-Tarawneh (2015) investigated the relationship between family socialization patterns and moral judgment among students in Jordan. They found that a democratic family style has a positive effect on moral judgment. No difference between males and females in moral judgment emerged.

Ibrahim (2004) studied social responsibility in relation to moral judgment and some personality variables in Saudi Arabia. In this study responsible person is defined as individual who takes responsibilities of the consequences of his own actions and being dependant, trustworthy, and shows a sense of obligation to the group (Gough et al., 1952). This study used Saudi social responsibility scale and moral judgment scale by Ibrahim (2004). The findings showed a significant positive correlation between social responsibility and the level of moral judgment. Furthermore, there was a positive correlation between social responsibility and emotional stability and extraversion traits.

Othman (2015) investigated sexual harassment as an indicator of moral behaviour among university students in Egypt. Furthermore, this study identified differences between male and female students on moral behaviour scale with females scoring higher than males. The results showed that there was a negative relationship between sexual harassment and moral behaviour scores.

**Islamic values.** As indicated in the study by Bouhmama (1984), religious values might affect moral reasoning, moral judgment, and potentially, moral behaviour. Given that Islam strongly influences social and moral life in Saudi Arabia, it is worth discussing moral conceptions in Islam. In Islam, morality and religion are comparable. It is hard for Muslims to

discuss morality without mentioning Islam (Halstead, 2007). According to Ashraf (1988), in Islam moral behaviour requires faith, and faith will not be true unless it generates moral behaviour. Morality in Islam is considered as a list of rules, duties, and responsibilities which are found in the Quran and the hadith (sayings of Prophet Muhammad) (Halstead, 2007). Benevolence, piety, justice, honesty, and gratitude are among the values taught in Islam and mentioned in the Quran (Halstead, 2007).

In Islam morality consists of two components akhlag and adab (Halstead, 2007). Akhlag can be translated as ethics or moral values. According to Alqardawi (1981), akhlag is grouped into six groups. Akhlag related to the self, akhlag related to the family, akhlag related to the society, akhlag related to the animal world, akhlag related to the physical environment, akhlag related to god. The second component is adab which contains two distinguished way of understanding good behaviour such as politeness, courtesy, good upbringing and good manners or morality and values (Halstead, 2007).

The western concept of morality as right or wrong does not cover the whole concepts of morality in Islam. Islamic morality can be divided into three categories. First category, the obligations and duties authorized by shariah (Islamic law). There is a distinction between obligations such as praying five times a day, permitted behaviour such as working hard, and forbidden behaviour such as theft. The second category, are the values and manners taught during upbringing such as the Prophet Muhammad's behaviour in eating and sleeping. The third category is Islamic virtues that are related as well to the Prophet Muhammad's behaviour. Integrity, honesty, humility, self-control, chastity, and purity are examples of Islamic virtues (Halstead, 2007). In comparing morality in Islam and western culture, all categories are found in western cultures but there are some differences for example some Islamic moral values are not considered moral values in the west, the values might be defined and classified in a different

way, and values might be prioritize differently (Halstead, 2007). For example, generosity, conservative dressing style, being kind to your neighbours and taking care of your own parents are considered moral values in Islam. Another example of immoral act in Islam is drinking alcohol which is not considered immoral in western culture.

**Summary.** The previous sections discussed Morality and Culture. The first section focused on the relationship between Morality and Culture, and on different studies on Morality across cultures. The second section discussed three ethics approach to moral reasoning and moral foundation theory which suggests that there are cross-cultural similarities and differences in how morality and the moral domain are conceptualized. It also reviewed studies that examined the use of the three ethics in different countries such as Jensen(1995) and Rozin et al (1999). The third section investigated studies on Morality in the Middle East. Finally, the fourth section focused on Islamic values as religious values that might affect morality and for that Islam has a strong influence on social and moral life in Saudi Arabia.

#### **1.4. Overview of this thesis**

The main objective of this thesis was to investigate and compare moral functioning in participants from Saudi Arabia and the United Kingdom. Drawing on moral foundation theory allowed exploring a wider moral domains that included additional moral concerns than those investigated in previous research. In four empirical studies I examined the role or personality characteristics and values for moral judgment, the relationship between moral judgment, the moral self and moral behaviour, and whether violations in the five moral domains are associated with specific moral emotions. This is the first time that moral foundation theory is investigated in

such depth in a Middle Eastern culture. In fact, very little research on moral functioning in Saudi Arabia exists. The lack of moral research in Saudi Arabia can be attributed to multiple reasons. First, the morality of Saudi people is based on Islam and Quran and the need for psychological moral research, which is often conducted in a secular tradition, is less important to them. Second, the development of research in Saudi Arabia in general is modest compared to other parts of the Middle East due to the late start of (higher) education in Saudi Arabia. Third, moral research is at an earlier stage of development than in the West and moral functioning is a relatively new field of study in Saudi Arabia. For instance, moral research in Saudi Arabia is focusing on the application of Kohlberg's social-cognitive theory and ignoring other new theories of moral development such as domain theory and moral foundation theory. At the same time, this thesis explores facets of moral functioning (e.g., moral behaviour, the moral self, moral emotions) that have rarely been investigated in relation to moral foundation theory. Thus, this thesis not only contributes to a better understanding of moral foundation theory but also to the wider field of cross-cultural moral psychology.

### **Study 1**

The first objective of Study 1 was to understand people's moral judgment in Saudi Arabia and the UK. In this study, moral judgment was measured by drawing on Moral Foundation Theory (MFT; Graham et al., 2011). Graham et al. (2011) found that Asian participants were significantly more concerned about ingroup and purity concerns than participants from western societies, while there was no difference in the endorsement of harm, justice, and authority. Given that Saudi, like Asian, participants might be more likely to endorse an ethic of community and divinity (Rozin et al., 1999), I expected Saudi participants to endorse ingroup, authority, and purity concerns more than UK participants. However, I expected no differences in the endorsement of harm and justice. The second goal of this study was to

investigate whether personality traits and cultural values are related differently or similarly across Saudi and UK cultures. According to Bilsky and Schwartz (1994) values and traits are two different concepts. Relatively few studies investigated values with personality traits in a cross-cultural, and particularly Middle-Eastern, context. The third goal of Study 1 was to investigate whether and how personality traits and cultural values affect moral judgment. According to Graham et al. (2011), moral foundations correlated significantly with some of Schwartz's values. However, it is not clear how values related to the moral foundations among Middle Eastern participants. Similarly, while research in western cultures has found a positive relationship between conscientiousness, agreeableness, openness to experience and justice-based moral judgment (McFarran et al., 2010), it is not clear how personality traits relate to the other moral dimensions, especially ingroup, authority, and purity.

## **Study 2**

In Study 2, I focused on related, but different questions. First, I was interested in whether the cross-cultural differences concerning the five moral foundations would be applied for moral judgments and moral behaviour. I employed the dictator game situation (see Camerer, 2003) to create moral situations that corresponded to the five moral foundations. In line with findings by Graham et al. (2011), I expected cross-cultural differences in moral behaviour related to the five moral foundations. Second, I examined whether the moral judgments in the five moral foundations also predicted people's actual moral behaviour. Third, I investigated whether participants' general and personal moral values (or their moral identity) mediated the relationship between moral judgment and moral behaviour. Given the findings by Schier et al. (2016), foundation-specific moral judgments might predict foundation-specific moral behaviour. In addition, given the recent literature assuming the importance of the moral self on moral action (e.g., Hardy & Carlo, 2011), moral judgment might not predict moral behaviour directly, but that

the relationship between moral judgment and moral behaviour might be mediated by people's moral self (i.e., their personal moral values or moral identity) or their general values.

### **Study 3**

The first goal of Study 3 was to assess whether honesty as a moral behaviour was related to moral judgment and general and personal (moral) values. This relationship was investigated in two different cultures, namely Saudi Arabia and the UK. I expected that moral judgment in the harm and fairness foundation might be positively related to honesty. Furthermore, according to the theoretical assumptions of moral identity theory (e.g., Blasi, 2005) I explored whether moral identity would mediate the relationship between moral judgment in the five moral foundations and dishonest behaviour. Few studies examined the relationship between moral identity and immoral behaviour. The second goal of Study 3 was to investigate the cross-cultural differences in cheating behaviour between Saudi Arabia and the UK. To the best of my knowledge, no study has assessed cheating in Saudi Arabia or investigated the role of moral variables. Based on Triandis's (1995) assumption, participants from the UK should cheat less in the experimental task used in this study than Saudi participants. Furthermore, it is possible that moral judgments in the different foundations has a different influence on honest behaviour in Saudi Arabia and the UK.

### **Study 4**

The main goal of Study 4 was to explore the link between moral emotions and moral foundation violations. This link will be investigated in two different cultures, namely Saudi Arabia and the UK. I again drew on moral foundation theory (Graham et al., 2011) to assess the link between five different moral foundation violations (harm, justice, ingroup, authority, and purity) and anger, disgust, sadness, apathy, guilt, contempt, shame, resentment, and embarrassment emotions. Based on the findings by Rozin et al. (1999), violations of the harm

and fairness foundations might be expected to trigger anger, violations of ingroup and authority foundations might trigger contempt, and violations of purity foundation might trigger disgust. This relationship between moral foundations and associated emotions has not been investigated in the Middle East context. The second goal of Study 4 was to check for cross-cultural differences in which moral violations are considered non-moral violations by participants in the two cultural samples and in linking certain emotions to moral foundation violations.

## **Conclusion**

In this part of the thesis, the literature of the main variables has been reviewed in order to enhance the theoretical background of the study. Firstly, morality has been defined based on different studies and the main components of morality have been identified. Secondly, major theories on morality and moral development were reviewed. Thirdly, moral judgment, moral reasoning, and moral behaviour have been reviewed through the literature in terms of its definition and the factors that affect them. Fourth, as this study is about exploring cross-cultural comparisons between Saudi Arabia and UK in different variables, a review of studies on the cross-cultural perspective in psychology has been conducted focusing on factors such the goals of cross-cultural psychology and its main components. Fifth, Individualism and collectivism have been addressed. It has been found that only few studies explored such concepts. However, definitions of individualism and collectivism have been introduced as well as differences between the two concepts and their main constructs. Sixth, this Introduction tried to shed the light on Saudi Arabia in terms of social behaviour, traditions, values and religion. Finally, moral judgment and moral behaviour in the Middle East have been reviewed through existing literature.



## **CHAPTER 2:**

### **STUDY 1: THE INFLUENCE OF PERSONALITY TRAITS AND VALUES ON MORAL JUDGMENTS IN SAUDI ARABIA AND THE UNITED KINGDOMS**

#### **Introduction**

As discussed in Chapter 1, research comparing morality in Middle Eastern and Western-European countries is rather rare. While Graham et al. (2011) conducted large-scale online studies which also included participants from the Middle East, no study has systematically investigated differences in people's moral judgments between western-European and Middle Eastern participants. Drawing on moral foundation theory, Study 1 examined people's moral judgment in Saudi Arabia and the UK. Moral foundation theory might be particularly apt to study cross-cultural differences, as the moral domain includes aspects of morality that might be more pronounced on Non-Western cultures (e.g., the ingroup moral foundation). Furthermore, I was interested in psychological variables underlying people's moral judgments in Saudi Arabia and the UK, particularly the role of personality traits and cultural values. In the following, I will review research on personality, values, and their relationship to morality in different cultural contexts.

#### **Personality**

Personality has been defined widely and differently by many researchers over the years. According to Funder (1997, pp. 1-2) personality is "an individual's characteristic pattern of thought, emotion, and behaviour, together with the psychological mechanism- hidden or not-behind those patterns", and Fiske (1971, p. 299) defined personality as "a lasting characteristic

attributed to persons in varying amounts of strength.” In sum, personality is integrated interaction of physical, mental, emotional and social characteristics that distinguish the person and make him or her unique.

The trait approach of personality has emerged as the dominant paradigm in personality research. This approach views personality as a trait construct and is based on a measurement model of individual differences. McCrae and Costa (1999) defined traits as “dimension of individual differences in tendencies to show consistent pattern of thoughts, feelings, and actions” (p.23). This view of personality is based on the work of Allport, Cattell, and Eysenck (Hofstede & McCrae, 2004). Traits are considered fundamental determinants of behaviour, and are the basis of behavioural consistency over different situations and time (Parks-Leduc et al., 2015; Waters, 1981). In addition, personality traits can be described as heritable but at the same time immune to social influences, such as parents and society, and stable throughout adulthood (Caspi et al., 2005; Olver & Mooradian, 2003). For example, twin studies showed similar personality traits in identical twins even when they were raised apart (Plomin et al., 1999).

The five-factor model (Costa & McCrae, 1985) of personality emerged as the most widely-used theory to classify inter-individual differences in personality. It includes five broad traits, namely extraversion, agreeableness, conscientiousness, neuroticism (emotional stability), and openness to experience. Table 2.1 lists a number of characteristics associated with each one of those five factors (Parks-Leduc et al., 2015). Many personality psychologists agree that these five factors are necessary and sufficient to explain the content of normal personality (Mount & Barrick, 1995). In addition, McCrae and Costa (1997, p. 509) stated that “many psychologist are now convinced that the best representation of trait structure is provided by the five-factor model”. Classifying personality traits into five broad categories has had positive effects on the

reliability and validity of their measurement (Parks & Guay, 2009). According to McCrae and Costa (1997), the five factor model is considered to be an excellent way to arrange personality traits and has cross-cultural generalizability (Parks & Guay, 2009).

Table 2.1 Five-factor model of personality adapted from Parks-Leduc et al. (2015).

Construct	Description: The extent to which individuals tend to be
Openness to Experience	curious, intellectual, imaginative, creative, innovative, and flexible (vs. closed-Minded, shallow, and simple)
Agreeableness	helpful, good-natured, cooperative, sympathetic, trusting, and forgiving (vs. rude, Selfish, hostile, uncooperative, and unkind)
Extraversion	sociable, talkative, optimistic, ambitious, assertive, reward-seeking, outgoing, and Energetic (vs.introvrted, shy, reserved, quiet, and unadventurous)
Conscientiousness	organized, responsible, dependable, neat, efficient, and achievement-oriented (vs. disorganized, lazy, irresponsible, careless, and sloppy)
Neuroticism	calm, self-confident, stable, resilient, and well-adjusted (vs. neurotic, nervous, insecure, fearful, and anxious)

## Values

Value theory defines values as “desirable, trans-situational goals, varying in importance that serves as guiding principles in people’s lives” (Roccas et al., 2002, p. 790). Values, unlike personality traits, are assumed to be learned beliefs (Olver & Mooradian, 2003). According to Schwartz and Bilsky (1994, p. 164) “values are concepts or beliefs about desirable end states or behaviors that transcend specific situations, guide selection or evaluation of behavior and events, and are ordered by relative importance”. Values are defined by Parks and Guay (2009, p.676) as “learned beliefs that serve as guiding principles about how individuals ought to behave”. Values are assessments because they direct people’s judgment in terms of their own and others’ suitable behaviour. Values are situation-general because they arise across specific situations. In addition,

values can be arranged by personal importance, so people will act according to the most important values first, etc. (Parks & Guay, 2009). In that sense, inter-individual differences in values can be established.

One of the most researched models of values in cross cultural studies is the Schwartz (1992) value theory (Parks-Leduc et al., 2015). In a comprehensive research project with samples of students and teachers in more than fifty-four societies, researchers distributed a fifty-six item scale measuring different values and behaviours. From this data, ten value types emerged (Berry, et al., 2002), which can be organized on two dimensions. The self-enhancement versus self-transcendence dimension contrasts values emphasizing acceptance of others as equals and concern for their welfare with values emphasizing the pursuit of one's own relative success and dominance over others. The openness-to-change versus conservation dimensions contrasts values emphasizing own independent thought and action and favouring change with those emphasizing submissive self-restriction. Thus, openness to change values (self-direction, stimulation) prompts independence of thought, feeling, and action, and receptiveness to change. They interfere with conservation values (conformity, tradition, security) that prompt conformable self-restriction, preserving traditional practices and maintaining stability. Self-transcendence values (universalism, benevolence) encourage accepting others as equals and caring for their welfare. They interfere with self-enhancement values (power, achievement) that prompt following one's own relative success and control over others. Hedonism values are situated between openness and self-enhancement. Definitions and descriptions of the values in terms of their central motivational concern and examples of specific values that represent that concern are provided in Table 2.2. As depicted graphically in Figure 2.1, highly correlated values are located closer than lower correlated values, which mean there can be a conflict

between values (Parks & Guay, 2009). The existence of these ten types of values was supported by large number of empirical studies (see Schwartz, 1992, for a review). Schwartz and Boehnke (2004) demonstrated configural invariance for the ten values in 23 countries using Schwartz's values scale (SVS). Furthermore, analyses of samples using the short and long versions of PVQ support the distinct content of the ten values and the relation between them (Schwartz, 2006). CFAs of samples using SVS and PVQ measures support the individual-level values and their structure (Davidov, Schmidt & Schwartz, 2008).

Table 2.2 Schwartz value taxonomy (adapted from Parks-Leduc et al., 2015)

Construct	Description/Items: individuals who value this believe in the importance of
Power	being in charge of people and resources and having money (social power, wealth, authority)
Achievement	socially recognized successes (ambition, competence)
Hedonism	sensual pleasure (fun, enjoying life)
Stimulation	having stimulating experiences (daring, exciting life)
Self-direction	independence of thought and action (creativity, freedom, independent, curious)
Universalism	promoting the welfare of all people and nature (equality, social justice, protecting the environment)
Benevolence	the welfare of people you are close to (helpfulness, loyalty, honesty, forgiving)
Conformity	controlling impulses to fulfill others' expectations (self-discipline, obedience)
Tradition	maintaining traditions (moderation, respect for tradition, devout)
Security	safety and security of self, family, and nation (family security, social order, clean)

## Relationships between study variables

**Morality and personality.** A number of studies have explored whether people's moral functioning is related to personality characteristics. According to McFerran et al. (2010) a moral personality includes traits, such as conscientiousness, agreeableness, and openness to experience. Individuals who are high in agreeableness have traits like fairness, justice, and reciprocity (Matsuba & Walker, 2004; McAdams, 2009), which are related to high moral functioning. These data have guided researchers to name conscientiousness and agreeableness as “moral” traits (Colquitt et al., 2006; de Raad, Hendriks, & Hofstee, 1992; Hofstee, de Raad, & Goldberg, 1992; Saucier & Goldberg, 1996).

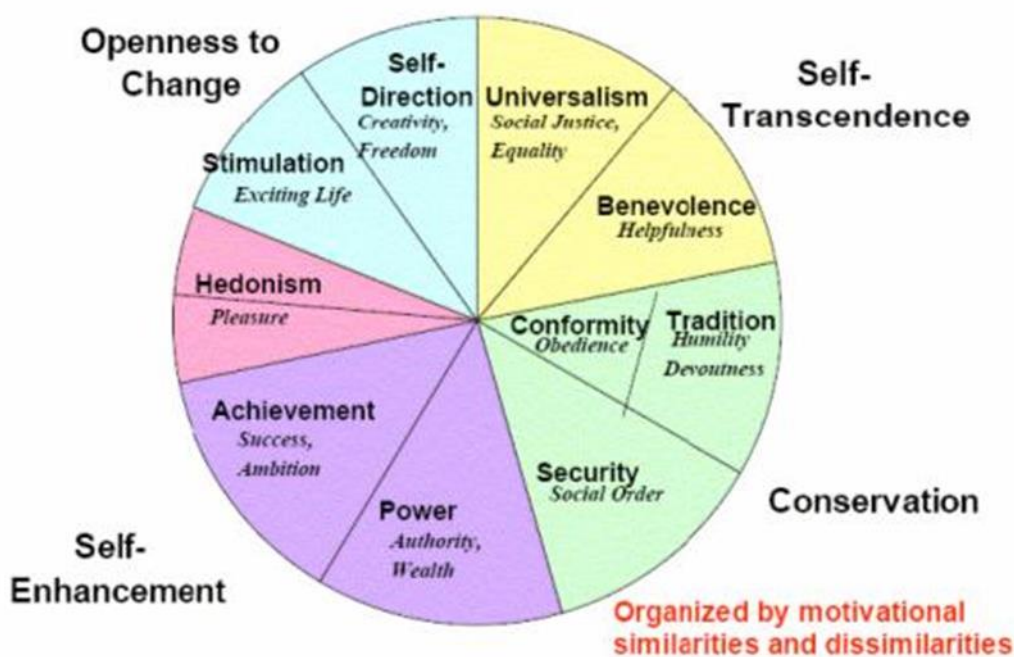


Figure 2.1. Theoretical model of relations among Schwartz's ten values (adapted from Schwartz, 1994).

Orpen et al. (2006) examined the relationship between personality, operationalized as the Big-Five personality traits, and moral reasoning stages. Results showed that openness to new experiences and conscientiousness were connected with more advanced levels of moral reasoning. Dollinger and LaMartina (1998) investigated the relationship between the Big-five and morality as measured with Defining Issues Test (DIT). The DIT was based on Kohlberg's (1969, 1971) theory of moral development and consists of six stories, each portraying a moral dilemma. Only openness to experience was positively related to moral reasoning, in line with the findings by Orpen et al. (2006).

The relationship between moral judgment and personality characteristics was also examined by Stojiljkovic (1998) in 16-17 years old students. Characteristics such as intellectual abilities, emotional empathy, and basic personality dimensions (extraversion, neuroticism and psychoticism) were studied. The results showed that a relationship between personality characteristics and moral reasoning exists, although this relationship was not very strong. According to the results, moral judgment was positively related to intellectual abilities. Emotional empathy and basic personality dimensions (extraversion and neuroticism) also affected moral reasoning of the conventional level type. For example, accepting others' point of view and their interests are fundamental features of conventional morality and could be readily exhibited by extraverts.

**Relationship between morality and values.** Moral psychologists have largely ignored values research even though this research could enrich the field of moral psychology as many values are, indeed, moral values (Graham et al., 2011). In a study by Vauclair and Fischer (2011), the relationship between values and moral attitudes was examined. The authors concluded that attitudes towards dishonest-illegal behaviours were not directly related to cultural



values. However, they found little variance in attitudes toward these behaviours between countries because of the interrelationship between cultural values and socio-economic development. Furthermore, this study found a large within-culture variance specifically in two moral domains, namely personal-sexual and dishonest-illegal issues. For example, in these two moral domains individual with lower income were more tolerant in their moral judgments. In addition, there was a difference across countries in the relationship between individual-level predictors and moral attitudes. For example, in countries that appraised mastery and egalitarianism, religiosity was more strongly related to strict moral attitudes than in countries that appraise harmony and hierarchy.

A study by Schwartz (2007) investigated which values are typically viewed as moral by Israeli adults. More than 80% of participants marked the items used to measure benevolence values as moral and at least 70% marked all or most of the items used to measure universalism, conformity, tradition, and security values as moral. On the other hand, less than 20% marked any of the items that measure power, achievement, hedonism values as moral, and less than 30% marked more than one of the self-direction items as moral. The five values considered moral (benevolence, universalism, conformity, tradition, security) by most participants promote or protecting positive relations of self to others. The five values considered non-moral were related to promoting or expressing self-interest either without regard to others (self-direction, stimulation, hedonism) or in competition with them (power, achievement).

Graham et al. (2011) correlated Schwartz's values and moral judgment in the five moral foundations. Benevolence values correlated highly positively with moral judgment regarding harm. Universalism values correlated highly positively with moral judgment regarding harm and fairness. Benevolence and security values correlated highly positively with moral judgment

regarding authority and ingroup. Security, power, tradition, and conformity values correlated highly positively with ingroup, authority, and purity. Conformity and tradition values correlated highly positively with purity. Thus, there seems to be a meaningful relationship between moral judgment in the five moral foundations and values. One goal of this study was to investigate whether these correlations are similar in the UK and Saudi Arabia.

**The relationship between personality traits and cultural values.** Many studies investigated the topic of personality and values separately but a few also looked at their interrelations. In addition, a handful of studies have tried to merge the two constructs either theoretically or empirically (Olver & Mooradian, 2003). The two concepts have been studied separately since 1930s, when Allport (1937) referred to traits as temperament and values as character. Some researchers do not distinguish between traits and values (Parks-Leduc et al., 2015). Another group of researcher believe that traits and values are different but related components of personality (Parks-Leduc et al., 2015).

Parks-Leduc et al. (2015) elaborated on the history of research assessing the relationship between personality traits and cultural values. Despite the similarity between values and traits, some researchers distinguish between them. The first difference is that traits are descriptive variables and values are motivational ones. Traits are a description of how people aim to behave, feel, and think, but values are expression of an individual's motivations that may or may not be reflected in behaviour (Parks-Leduc et al., 2015; Roccas, Sagiv, Schwartz, & Knafo, 2002). For example, a cooperative person (trait) tends to think and behave in cooperative way. However, valuing cooperation may or may not lead to cooperative thinking or behaviour. Second, traits are assumed to have a biological basis, whereas values are produced from a person's environment such as education, culture and parenting styles (Parks-Leduc et al., 2015). Schwartz (1992)

differentiated between values and traits as values being what people believe to be important to them and traits being about how people tend to think, feel and behave.

Bilsky and Schwartz (1994) distinguished between values and traits in three ways: First, personality traits are usually considered behaviour descriptions, whereas values are standards people use to judge the attractiveness of behaviour, people, and events. Second, personality traits differ in how much of characteristic people express, whereas values differ in the importance people attribute to certain goals. Third, personality traits depict behaviour in terms of ‘what persons are like’ despite their intentions, whereas values are about persons intentional goals.

Even though traits and values are different constructs, they are empirically found to be related through many studies (Haslam et al., 2009) (see Table 2.3). For example, Schwartz and Bilsky (1994) found meaningful connections of values with personality variables. When using Eysenck’s classification of personality traits, the personality trait of extraversion was related to stimulation and hedonism. When using the Guilford personality traits, social

Table 2.3 Most commonly found correlation between personality traits and values by studies included in this research.

Personality traits	Values			
	Study 1	Study 2	Study 3	Study 4
	Parks & Guay (2009)	Olver & Mooradian (2003)	Haslam et al. (2009)	Roccas et al. (2002)
Conscientiousness	Achievement, conformity,	Security, conformity,	conformity, security,	Achievement, conformity

	security	Achievement	tradition	
Neuroticism	_____	_____	Tradition	
Extraversion	Power, achievement, stimulation	_____	Stimulation, self-direction, hedonism	Achievement, Stimulation, hedonism
Agreeableness	Universalism, benevolence, tradition	Universalism, benevolence, tradition, conformity	Benevolence	Benevolence, Tradition, conformity
Openness to experience	Stimulation, self-direction, universalism	Universalism, Stimulation, self-direction	Universalism, Stimulation, self-direction	Universalism, Stimulation, self-direction

orientation was related to self-transcendences, and aggressiveness was related to self enhancement. A study by Roccas et al. (2002) with students at an Israeli university found that traits such as extraversion were related to values of achievement, stimulation and hedonism. Agreeableness was related to benevolence, tradition, and conformity values, and openness was related to universalism, self-direction and stimulation values. Finally, conscientiousness was related to achievement and conformity values (Roccas et al. 2002) (see Table 2.3). Haslam et al. (2009) examined whether associations between values and subjective well-being were mediated

by personality traits. The results resemble those of Roccas et al. (2002). Traits and values were significantly associated with subjective well-being and with each other. Associations between traits and values varying from small to moderate in size reveal common variance between them (Haslam et al., 2009). Drawing on 60 studies, Parks-Leduc et al. (2015) conducted a meta-analysis on the relationships between the five-factor model of personality traits and the Schwartz's cultural values. The study showed that the relationships were not huge because traits and values are different constructs. However, the results show meaningful relationships on how traits and values are related in consistent way. The more cognitively based traits, such as openness to experience, were more strongly related to values, and emotionally-based traits, such as neuroticism, had modest relationship to values (see Table 2.4). Table 2.5 summarizes the main meta-analysis results.

Table 2.4. Ranking of the strongest correlation between personality traits and values (adapted from Parks-Leduc et al., 2015).

Personality traits	Values
Openness to experience	Self-direction
Agreeableness	Benevolence
Openness to experience	Universalism
Conscientiousness	Conformity
Conscientiousness	Achievement

Table 2.5 Summary of the main Meta-Analysis results showing the relationship between personality traits and values (adapted from Parks-Leduc et al., 2015)

Values	Personality traits				
	Openness to Experience	Agree- ableness	Extraversion	Conscientious- ness	Emotional stability
Power	-.06	-.42	.31	.05	.03
Achievement	.11	-.24	.31	.17	-.01
Hedonism	.09	-.11	.20	-.19	.01
Stimulation	.36	-.05	.36	-.16	.02
Self-direction	.52	-.07	.17	.01	-.01
Universalism	.33	.39	-.05	-.02	-.03
Benevolence	.13	.61	-.05	.07	-.01
Conformity	-.27	.26	-.17	.27	-.05
Tradition	-.31	.22	-.25	.10	-.03

Security	-.24	.00	-.05	.37	-.03
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## Cultural effects

The assumption of personality as having a genetic basis (Rieman et al., 1997) would result in finding similarities across cultural groups (Triandis & Suh, 2002). The work of McCrae and Costa suggests that the basic personal traits are found across cultures for many reasons: (a) similar personality structure appear in different cultures (Digman & Shmelyov, 1996; McCrae & Costa 1997; Pulver et al. 1995; Yang et al., 1999), (b) traits are developed through adulthood in similar way (McCrae et al.1999, 2000), and (c) traits have biological roots (Jang et al. 1998). The social anthropologist Bohannan (1971) described the relationship between culture and personality as saying that babies are born without culture, personality and social relationship. According to him, birth represents the end of the biophysical relationship and the start of social relationships. Gaining “culture” is done by the growth of the personality. This approach views personality as being developed through the process of enculturation; this is similar to some current ideas in psychological anthropology (Hofstede & McCrae, 2004).

The aim of this study was to explore the relationship between morality, personality traits, and cultural values in Saudi Arabia and the UK culture. Only a limited number of studies have investigated personality traits in the Saudi context. Furthermore, studies on cultural values and morality are even rarer. Previous studies in Arab countries found mixed results as to the validity of the big five model in Arabic cultures. Scholars such as Alansari (1997) concluded that the big five model cannot be applied to Arabic cultures. On the other hand, some scholars like Kadhem (2001) point out that the big five model has validity across different cultures and can be applied in Arabic cultures as well.

One of the first studies that explored the five factor model in Arabic countries was the study by Alansari and Abdel-khalek (1996). This study concentrated on the theoretical parts of the model such as the origin and the creation of the theory. Later on, the focus moved from theoretical to the application of the questionnaire such as the translation and validation of the associated measurements. Alansari (1997) investigated the validity of the five factor model by Costa and McCrae (1992) on a Kuwaiti sample of 3000 participants. However, the author was unable to apply the five factor model of personality in this culture. On the other hand, Kadhem (2001) examined the validity of the five factor model on Arabic society on a sample of 1053 undergraduate students. The results showed that the model had validity in that culture.

Alahmadi (2013) created a short form of big five factor instrument based on the five factor model of personality. The instrument consists of 20 statements and was aimed for a female sample. The instrument showed appropriate validity and reliability indicators. Similarly, Hussin (2013) translated the Big Five Questionnaire into Arabic and adapted it so that it fit Iraqi culture. This was done to first validate the use of this type of questionnaire in different cultures and second to examine the differences between the original version of the questionnaire and the translated version. The new questionnaire proved valid when applied to an Iraqi sample. Few differences were found between the original and translated version using factor analysis such as the number of traits (factors).

Al-ruwaita (2007) created a personality questionnaire to measure the five factors in Saudi Arabia. The author was interested whether the five personality factors could be found in Saudi Arabia with a locally developed instrument. The items of the questionnaire were generated from three sources: (1) previous studies based on the theoretical framework by Goldberg, Costa, and McCrae; (2) the international personality item pool by Goldberg (2001); and (3) questionnaires



that had been validated in Saudi Arabia such as Eysenck Personality Questionnaire-Revised. Five personality factors were extracted. The study expected to detect traits such as Neuroticism and Extraversion as their existence is supported by previous universal and local studies like Eysenck (1970) and Al-ruwaita and Al-sharif (2007). The detection of consciousness, openness to experience, agreeableness was unexpected. Twenty items loaded on consciousness while 19 items loaded on extraversion factor, which has been widely accepted. This criticism is in line with another study by Alansari (1997) on Arabic societies. Some researchers assume that openness is a product of individualistic cultures (Triandis & Suh, 2002) and is not common in collectivistic cultures (Realo, Allik, & Vadi, 1997). However, openness to experience was still considered a personality factor and emerged in this study as an essential factor.

To my knowledge, only one study examined the relationship between personality traits and values in a Middle Eastern culture. Kadhem (2002) studied the relationship between the two constructs in students from an Omani university. The results of the study showed only one correlation between religious values and conscientiousness/ extraversion which indicates the independence of values from personality traits in this particular culture.

### **The present study**

The first objective of this study was to understand people's moral judgment in Saudi Arabia and the UK. In this study, moral judgment was measured by drawing on Moral Foundation Theory (MFT; Graham et al., 2011). As discussed in Chapter 1, MFT broadened the domain of morality. While earlier research defined morality in terms of harm/care and justice/reciprocity (e.g., Kohlberg, 1969, 1971; Turiel, 1983), MFT includes moral concerns, such as ingroup/loyalty, authority/respect, and purity that might be more representative of morality in non-western, collectivistic societies. Indeed, Graham et al. (2011) found that Asian

participants were significantly more concerned about ingroup and purity concerns than participants from western societies, while there was no difference in the endorsement of harm, justice, and authority. Given that Saudi, as Asian participants, might be more likely to endorse an ethic of community and divinity (Rozin et al., 1999) we expected Saudi participants to endorse ingroup-, authority-, and purity-related concerns more than UK participants. However, we expected no differences in the endorsement of harm and justice.

The second goal of this study was to investigate whether and how personality traits and cultural values affect moral judgment. In their validation study of the MFT, Graham et al. (2011) found that the moral foundations correlated significantly with some of Schwartz's values. However, it is not clear how values are related to the moral foundations among Middle Eastern participants. Similarly, while research in western cultures has found a positive relationship between conscientiousness, agreeableness, openness to experience and justice-based moral judgment (McFerran et al., 2010), it is not clear how personality traits relate to the other moral dimensions, especially ingroup, authority, and purity. Furthermore, since not all personality traits, and especially openness to experience, might be as reliably measured in the Middle Eastern context, the correlations between traits and moral judgment reported for western societies might not appear here.

The third goal of this study was to investigate whether personality traits and cultural values are related differently or similarly across Saudi and UK cultures. Bilsky and Schwartz (1994) distinguished between values and traits in three ways: (1) personality traits are usually considered behaviour descriptions, whereas values are standards people use to judge the attractiveness of behaviour, people, and events. (2) Personality traits differ in how much of characteristic people express, whereas values differ in the importance people attribute to certain

goals. (3) Personality traits depict behaviour in terms of ‘what persons are like’ despite their intentions, whereas values are about persons intentional goals.

Many studies investigated the topic of personality and many studies investigated the topic of cultural values but few studies combined the investigation of values and personality traits in a cross-cultural, and particularly Middle-Eastern, context. Parks-Leduc et al. (2015) assume that the relation between traits and values might be universal. Although their research explains that the means of measures of values and traits differ across cultures, the links between them might be universal. Given that some researchers suggest that not all of the Big Five personality traits could be identified in a Middle Eastern context (e.g., Alansari, 1997; Realo et al., 1997), the relationship between values and personality traits might not be as universal as reported before. However, if there is a universal relationship between personality traits and values, we would expect the following correlations: (1) Openness to experience should be positively related to self-direction, stimulation, universalism, and hedonism values; (2) Agreeableness should be positively related to universalism, benevolence, tradition, and conformity values; (3) Conscientiousness should be positively related to conformity, tradition, security, power, and achievement values; (4) Extraversion should be positively related to power, achievement, stimulation, and hedonism values; (5) Neuroticism should have no relationship with any values.

## **Method**

### **Participants**

Four-hundred and nineteen adults aged 18 years and older participated. The Saudi sample consisted of 241 participants (M-Age = 25.66 years, SD = 7.88, 156 females, 85 males). The British sample consisted of 178 participants (M-Age = 22.98 years, SD = 9.19, 130 females, 48

males). All participants were undergraduate students at a Saudi or British University, respectively.

## **Procedure**

Participants were sent the link to an online survey. The first page was a brief where participants were informed about the study, the anonymity of their data as well as their right to withdraw. Upon clicking a box that they consented to participate, participants were guided through the questionnaire online. After filling some demographic information, the respective sections of the questionnaire were presented in random order. After completing all the questions, participants were presented with a debrief. The whole study took no longer than 30 minutes.

## **Measures**

**Demographic information.** Participants were asked to report their age, gender, place of living, education level, marital status, and nationality.

**NEO Five Factor Inventory (FFI).** The NEO FFI by Costa and McCrae (1992) was used to determine participants' personality traits. In this 60 item scale, participants have to choose one out of five responses ranging from (1) strongly disagree to (5) strongly agree. For example, the item, "I like to have a lot of people around me" describes an item used to measure extraversion. For the Saudi sample, the translation by Alansari (1997) was used. Alansari (1997) translated the original scale to Arabic and then back-translated it to English. The measure was also presented to specialist in psychology to check the accuracy of the translation. Finally, reliability and validity analyses of the scale were conducted on a Kuwaiti sample with 3789 Participants.

Five scores were derived separately for each sample: For the Saudi sample Cronbach's alphas were: neuroticism ( $\alpha=0.81$ ), extraversion ( $\alpha=0.58$ ), openness ( $\alpha=0.37$ ), agreeableness

( $\alpha=0.15$ ), and conscientiousness ( $\alpha=0.79$ ). For the British sample Cronbach's alphas were neuroticism ( $\alpha=0.90$ ), extraversion ( $\alpha=0.83$ ), openness ( $\alpha=0.71$ ), agreeableness ( $\alpha=0.11$ ), and conscientiousness ( $\alpha=0.86$ ).

**Portrait Values Questionnaire (PVQ).** The PVQ by Schwartz et al. (2001) was used to determine participants' values. This questionnaire consists of 40 items, each portraying a person's goals, aspirations, or wishes that point implicitly to the importance of a value. As an example of the scale item, "He thinks it is important to do lots of different things in life. He always looks for new things to try" describes a person who considers stimulation value important, "He believes all the worlds' people should live in harmony. Promoting peace among all groups in the world is important to him" describes a person who considers universalism values important. For each portrait, participants indicated how similar the described person is to himself/herself on a scale with six responses options ranging from (1) very much like me to (6) not like me at all. Ten scores were derived separately for each sample; Cronbach's alphas for the Saudi sample were benevolence ( $\alpha=0.74$ ), universalism ( $\alpha=0.74$ ), self-direction ( $\alpha=0.69$ ), stimulation ( $\alpha=0.69$ ), hedonism ( $\alpha=0.77$ ), achievement ( $\alpha=0.79$ ), power ( $\alpha=0.53$ ), security ( $\alpha=0.72$ ), conformity ( $\alpha=0.60$ ), and tradition ( $\alpha=0.51$ ). For the British sample Cronbach's alphas were benevolence ( $\alpha=0.68$ ), universalism ( $\alpha=0.74$ ), self-direction ( $\alpha=0.60$ ), stimulation ( $\alpha=0.71$ ), hedonism ( $\alpha=0.67$ ), achievement ( $\alpha=0.81$ ), power ( $\alpha=0.50$ ), security ( $\alpha=0.56$ ), conformity ( $\alpha=0.70$ ), and tradition ( $\alpha=0.51$ ). This version of the questionnaire was tested by Schwartz and Rubel (2005) in a multicultural study. It was translated to Arabic by Benish-Weisman (2015).

**Moral Foundations Questionnaire (MFQ; Graham et al., 2008).** This 30 item questionnaire is divided in two sections: moral relevance and moral judgment. Each section has five moral foundations, harm, fairness, ingroup, authority, and purity. For moral relevance,

participants were asked to evaluate the moral relevance of five foundations for each statement. Items like “Whether or not someone suffered emotionally” would represent harm in moral relevance part. Each statement and has six response options ranging from (1) not at all relevant to (6) extremely relevant. Five scores were derived separately for each sample: For Saudi sample harm ( $\alpha=0.18$ ), fairness ( $\alpha=0.67$ ), ingroup ( $\alpha=0.58$ ), authority ( $\alpha=0.55$ ), and purity ( $\alpha=0.62$ ). For British sample harm ( $\alpha=0.65$ ), fairness ( $\alpha=0.69$ ), ingroup ( $\alpha=0.72$ ), authority ( $\alpha=0.55$ ), and purity ( $\alpha=0.50$ ).

In moral judgment, participants were asked to rate their moral agreement with each statement. Item like “Compassion for those who are suffering is the most crucial virtue.” Would represent harm in moral judgment part. Each statement has six responses ranging from (1) strongly disagree to (6) strongly agree. Five scores were derived separately for each sample: For Saudi sample harm ( $\alpha=0.41$ ), fairness ( $\alpha=0.35$ ), ingroup ( $\alpha=0.44$ ), authority ( $\alpha=0.57$ ), and purity ( $\alpha=0.57$ ). For British sample harm ( $\alpha=0.38$ ), fairness ( $\alpha=0.36$ ), ingroup ( $\alpha=0.61$ ), authority ( $\alpha=0.43$ ), and purity ( $\alpha=0.50$ ). The questionnaire was translated to Arabic by Bruneau (2010) and is available on the [moralfoundations.org](http://moralfoundations.org) website.

**Culture orientation scale (Individualism and collectivism scale).** The culture orientation scale by Triandis and Gelfland (1998) was used to determine participants’ level of individualism and collectivism. This 16-item questionnaire has four constructs, horizontal individualism, vertical individualism, horizontal collectivism, and vertical collectivism. Each construct consisted of four statements. Items like “I’d rather depend on myself than others.” would represent horizontal individualism, and “Family members should stick together, no matter what sacrifices are required” would represent vertical collectivism. Participants were asked to select from nine response options ranging from (1) never to (9) always for each statement. Four

scores were derived separately for each sample: For Saudi sample horizontal collectivism ( $\alpha=0.68$ ), vertical collectivism ( $\alpha=0.78$ ), horizontal individualism ( $\alpha=0.82$ ), and vertical individualism ( $\alpha=0.56$ ). For British sample horizontal collectivism ( $\alpha=0.68$ ), vertical collectivism ( $\alpha=0.69$ ), horizontal individualism ( $\alpha=0.57$ ), and vertical individualism ( $\alpha=0.69$ ). The questionnaire was translated to Arabic by the researcher. Back translation procedure was applied to ensure the comparability of the Arabic questionnaire.

## Results

### Descriptive statistics

The means and standard deviations of the study variables are shown in Table 2.6. A number of independent-samples t-tests were conducted to compare the main variables by culture (see Table 2.6). Concerning personality factors, participants from the UK scored higher in neuroticism and openness than participants from Saudi Arabia, but participants from Saudi Arabia scored higher in conscientiousness, agreeableness, and extraversion than participants from the UK.

Concerning values, participants from the UK and Saudi Arabia showed similar levels of benevolence, stimulation, and self- direction, but participants from the UK showed higher level of security, tradition, conformity, power, achievement, and hedonism. Participants from Saudi Arabia showed higher level of universalism.

Table 2.6. Means and standard deviations of the main variables by culture

	Saudi Arabia		United Kingdom		
	(N = 241)		(N = 179)		
Variables	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>t, p</i>

Personality factors					
Neuroticism	2.79	.61	3.13	.76	-4.97, .000
Openness	3.12	.38	3.40	.52	-6.36, .000
Extraversion	3.47	.40	3.31	.59	3.29, .001
Agreeableness	3.39	.31	3.26	.29	4.21, .000
Conscientiousness	3.74	.53	3.56	.61	3.25, .001
Values					
Self-direction	2.33	.86	2.40	.70	-.88, .376
Universalism	2.47	.85	2.30	.69	2.07, .039
Benevolence	2.22	.88	2.25	.76	-.41, .681
Stimulation	2.90	1.09	2.88	1.07	.20, .835
Hedonism	2.29	1.10	2.47	.88	-1.75, .081
Achievement	2.29	1.00	2.72	1.00	-4.36, .000
Power	3.35	1.05	4.02	.92	-6.76, .000
Security	2.06	.84	2.75	.77	-8.63, .000
Conformity	2.36	.89	2.93	.91	-6.37, .000
Tradition	2.93	.87	3.69	.81	-9.09, .000
Horizontal	5.58	.76	6.05	.68	-6.52, .000
Individualism					
Vertical Individualism	4.87	.97	4.51	1.19	3.38, .001
Horizontal	5.31	.83	5.83	.81	-6.37, .000
Collectivism					
Vertical Collectivism	5.48	.87	5.65	.97	-1.83, .067



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In terms of cultural orientation, participants from the UK scored higher in Horizontal Individualism and Horizontal Collectivism, than participants from Saudi Arabia. But participants from Saudi Arabia were higher in Vertical Individualism than participants from the UK. However, there was no cultural difference in Vertical collectivism.

#### **Are there cultural differences in the moral foundations?**

As shown in Table 2.7, regarding moral relevance, UK participants scored higher on harm and fairness, while Saudi participants scored higher on ingroup, authority, and purity. Saudi participants endorsed group focused moral foundations more than UK participants, while UK participants endorsed individual focused moral foundations more than Saudi participants do. Regarding moral judgment, Saudi participants scored higher than UK participants on ingroup, authority, and purity, but there were no differences between the two samples in harm and fairness.

#### **Correlations between personality traits and values**

Table 2.8 shows the correlations between personality traits and values in the Saudi sample. Many were correlated with each other as expected. However, we expected no correlation between conscientiousness and benevolence and self-direction, but they were correlated negatively. Furthermore, no correlations were expected between agreeableness and security and between extraversion and self-direction, but they were correlated negatively. Positive correlations were expected between agreeableness and benevolence, universalism, conformity, and tradition, but they were correlated negatively. Positive correlations were expected between conscientiousness and achievement, security, conformity, and tradition, but

Table 2.7. Means and standard deviations of moral relevance and moral judgment by culture

	Saudi Arabia		United Kingdom		
	(N = 241)		(N = 179)		
Variables	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>t, p</i>
Moral Relevance					
Harm	3.97	.95	4.79	.78	-9.40, .000
Fairness	4.23	1.24	4.83	.82	-5.59, .000
Ingroup	4.05	1.23	3.49	1.06	4.88, .000
Authority	3.90	1.18	3.52	.89	3.60, .000
Purity	4.33	1.27	3.13	.94	10.61, .000
Moral Judgment					
Harm	4.78	.99	4.60	.86	1.85, .065
Fairness	4.41	.89	4.48	.75	-.85, .391
Ingroup	4.19	.98	3.76	1.02	4.38, .000
Authority	4.75	.98	3.70	.90	11.61, .000
Purity	4.56	1.02	3.27	1.05	12.66, .000

they were correlated negatively. Positive correlations were expected between openness and universalism, self-direction, and stimulation, but they were correlated negatively. Positive correlations were expected between extraversion and stimulation, hedonism, achievement, and power, but they were correlated negatively. Negative correlations were expected between openness and security and tradition, but they were correlated positively. Negative correlations

were expected between neuroticism and self-direction and stimulation but correlated positively with self-direction and negatively with stimulation.

Table 2.8. *Correlation between the personality and values variables in Saudi sample*

Values	Personality variables				
	Conscientiousness	Agreeableness	Openness	Extraversion	Neuroticism
Benevolence	-.20**	-.23**	.03	-.20**	-.05
Universalism	-.23**	-.20**	-.15*	-.13	.04
Self-Direction	-.25**	-.12	-.20**	-.12	.08
Stimulation	.05	-.14*	-.11	-.17**	-.06
Hedonism	.02	-.18**	.05	-.14*	.00
Achievement	-.22**	-.15*	.02	-.24**	-.04
Power	.02	-.00	-.05	-.08	-.00
Security	-.26**	-.11	.11	-.09	-.03
Conformity	-.17**	-.13*	-.01	-.10	-.01
Tradition	-.14*	-.14*	.28**	-.05	-.03

As shown in Table 2.9, some personality traits and values in UK sample were correlated with each other as expected. However, we expected no correlations between conscientiousness and benevolence and self-direction, between agreeableness and security, between openness and benevolence, and between extraversion and self-direction, but they were all correlated negatively. We expected no correlation between neuroticism and stimulation, but they were correlated positively. Positive correlations were expected between conscientiousness and achievement, security, conformity, and tradition, but they were correlated negatively. Positive correlations

were expected between agreeableness and benevolence, universalism, conformity, and tradition, but they were correlated negatively.

Table 2.9. *Correlation between the personality and values variables in UK sample*

Values	Personality variables				
	Conscientiousness	Agreeableness	Openness	Extraversion	Neuroticism
Benevolence	-.11	-.12	-.18 <sup>*</sup>	-.42 <sup>**</sup>	-.10
Universalism	-.09	-.24 <sup>**</sup>	-.38 <sup>**</sup>	-.13	-.10
Self-Direction	-.09	-.21 <sup>**</sup>	-.43 <sup>**</sup>	-.28 <sup>**</sup>	.15
Stimulation	-.04	-.02	-.30 <sup>**</sup>	-.53 <sup>**</sup>	.23 <sup>**</sup>
Hedonism	.02	-.02	-.09	-.44 <sup>**</sup>	.02
Achievement	-.15 <sup>*</sup>	-.06	.04	-.14	.02
Power	.14	.11	-.02	-.25 <sup>**</sup>	.09
Security	-.34 <sup>**</sup>	-.14	.05	-.08	-.11
Conformity	-.19 <sup>*</sup>	-.13	.31 <sup>**</sup>	-.02	-.14
Tradition	-.05	-.16 <sup>*</sup>	.26 <sup>**</sup>	-.06	-.10

Positive correlations were expected between openness and universalism, self-direction, hedonism, and stimulation, but they were correlated negatively. Positive correlations were expected between extraversion and stimulation, hedonism, achievement, and power, but they were correlated negatively. Negative correlations were expected between conscientiousness and hedonism, but they were correlated positively. Negative correlations were expected between agreeableness and power, but they were correlated positively. Negative correlations were

expected between openness and security, conformity and tradition, but they were correlated positively. Negative correlations were expected between neuroticism and self-direction, stimulation and achievement but they correlated positively.

### **Predicting moral relevance and moral judgment**

For each moral foundation hierarchical multiple linear regression analyses were conducted to examine the relationship between moral foundations and potential predictors such as nationality, gender, age, personality traits, and cultural values. In Step 1 age, gender, and nationality were entered into the model. In Step 2, personality traits were additionally entered. In Step 3, cultural values were additionally entered. The results of these analyses can be found in Tables 2.10 to 2.19.

**Moral relevance.** Concerning harm, in Step 1, nationality positively and significantly predicted morality in the harm foundation, indicating that UK participants tended to endorse harm more,  $F(3, 368) = 31.08, p < .000, R^2 = .202$ . In Step 2, conscientiousness, neuroticism and openness trait positively and significantly predicted morality in the harm foundation, indicating that participants high in conscientiousness, neuroticism and openness endorse harm more,  $F(8, 368) = 16.08, p < .000, R^2 = .060$ . In Step 3, agreeableness and universalism significantly negatively predicted morality in the harm foundation, indicating that participants high in universalism and agreeableness endorse harm less,  $F(18, 353) = 8.36, p < .000, R^2 = .037$  (see Table 2.10).

Concerning fairness, in Step 1, nationality and gender positively and significantly predicted morality in the fairness foundation, indicating that UK participants tend to endorse fairness more,  $F(3, 368) = 13.19, p < .000, R^2 = .097$ . Furthermore, male participants tended to endorse fairness more,  $F(3, 368) = 13.19, p < .000, R^2 = .097$ . In Step 2, the openness trait

positively and significantly predicted morality in the fairness foundation, indicating that participants high in openness endorse fairness more,  $F(8, 368) = 6.99, p < .000, R^2 = .036$ . In Step 3, self-direction value negatively predicted morality in the fairness foundation, indicating that participants high in self-direction endorsed fairness less,  $F(18, 353) = 4.47, p < .000, R^2 = .052$  (see Table 2.11).

Regarding the ingroup foundation, in Step 1, nationality negatively and significantly predicted morality in the ingroup foundation, indicating that Saudi participants tend to endorse ingroup more,  $F(3, 368) = 9.08, p < .000, R^2 = .069$ . In Step 2, conscientiousness trait positively and significantly predicted morality in the ingroup foundation, indicating that participants high in conscientiousness endorsed ingroup more,  $F(8, 368) = 4.61, p < .000, R^2 = .023$ . In Step 3, agreeableness and conformity negatively predicted morality in ingroup foundation, indicating that participants high in conformity and agreeableness endorsed ingroup less,  $F(18, 353) = 2.89, p < .000, R^2 = .036$  (see Table 2.12).

Regarding the authority foundation, in Step 1, nationality negatively and significantly predicted morality in the authority foundation, indicating that Saudi participants tended to endorse authority more,  $F(3, 368) = 5.91, p < .001, R^2 = .046$ . In Step 2, none of the personality traits significantly predicted moral relevance of the authority foundation,  $F(8, 368) = 2.99, p < .003, R^2 = .016$ . In Step 3, age, agreeableness, self-direction, security and conformity negatively predicted morality in authority foundation, indicating that younger participants endorse authority more and that participants high in conformity, self-direction, security and agreeableness endorse authority less,  $F(18, 353) = 4.08, p < .000, R^2 = .111$  (see Table 2.13).

Regarding the purity foundation, in Step 1, nationality negatively and significantly predicted morality in purity foundation, indicating that Saudi participants tended to endorse purity more, and gender positively and significantly predicted morality in purity foundation,

indicating that male participants tended to endorse purity more,  $F(3, 368) = 39.17, p < .000, R^2 = .242$ . In Step 2, none of the personality traits significantly predicted the moral relevance of the purity foundation,  $F(8, 368) = 15.80, p < .000, R^2 = .016$ . In Step 3, agreeableness and conformity negatively predicted morality in the purity foundation, indicating that participants high in conformity and agreeableness endorse purity less,  $F(18, 353) = 9.81, p < .000, R^2 = .075$  (see Table 2.14).

**Moral judgment.** Concerning the harm foundation, in Step 1, gender negatively and significantly predicted morality in the harm foundation, indicating that female participants tend to endorse harm more,  $F(3, 368) = 3.83, p < .010, R^2 = .030$ . In Step 2, nationality negatively and significantly predicted morality in the harm foundation indicating that Saudi participants tend to endorse harm more, and neuroticism and conscientiousness trait positively and significantly predicted morality in the harm foundation, indicating that participants high in neuroticism and conscientiousness endorsed harm more,  $F(8, 368) = 3.60, p < .000, R^2 = .043$ . In Step 3, agreeableness and benevolence negatively predicted morality in the harm foundation, indicating that participants high in benevolence and agreeableness tend to endorse harm less, and power value positively and significantly predicted morality in harm foundation, indicating that participants high in power tend to endorse harm more,  $F(18, 353) = 5.09, p < .000, R^2 = .133$  (see Table 2.15).

Regarding the fairness foundation, In Step 1, no significant predictors were found,  $F(3, 368) = 1.04, p = .375, R^2 = .008$ . In Step 2, the conscientiousness trait positively and significantly predicted morality in the fairness foundation, indicating that participants high in conscientiousness endorsed fairness more,  $F(8, 368) = 1.30, p < .000, R^2 = .020$ . In Step 3, universalism and achievement value negatively predicted morality in the fairness foundation,

indicating that participants high in universalism and achievement endorsed fairness less,  $F(18, 353) = 3.32, p < .000, R^2 = .117$  (see Table 2.16) .

Regarding the ingroup foundation, In Step 1, nationality negatively and significantly predicted morality in the ingroup foundation, indicating that Saudi participants tended to endorse ingroup more,  $F(3, 368) = 6.60, p < .000, R^2 = .051$ . In Step 2, gender and the extraversion trait positively and significantly predicted morality in the ingroup foundation, indicating that male participants and participants high in extraversion tend to endorse ingroup more. Furthermore, the openness trait negatively and significantly predicted morality in ingroup foundation, indicating that participants high in openness tended to endorse ingroup less,  $F(8, 368) = 6.63, p < .000, R^2 = .077$ . In Step 3, benevolence, achievement, and conformity negatively predicted morality in ingroup foundation, indicating that participants high in benevolence, achievement, and conformity tend to endorse ingroup less. Furthermore, self-direction and hedonism values positively predicted morality in ingroup foundation, indicating that participants high in hedonism and self-direction tend to endorse ingroup more,  $F(18, 353) = 7.64, p < .000, R^2 = .153$  (see Table 2.17).

Regarding the authority foundation, In Step 1, nationality negatively and significantly predicted morality in the authority foundation, indicating that Saudi participants tended to endorse authority more. Furthermore, age positively and significantly predicted morality in the authority foundation, indicating that older participants tended to endorse authority more,  $F(3, 368) = 35.19, p < .000, R^2 = .223$ . In Step 2, the conscientiousness trait positively and significantly predicted morality in authority foundation, indicating that participants high in conscientiousness tended to endorse authority more, and the openness trait negatively and significantly predicted morality in authority foundation, indicating that participants high in openness tended to endorse authority less,  $F(8, 368) = 15.99, p < .000, R^2 = .038$ . In Step 3,



neuroticism, benevolence, achievement, tradition and conformity negatively predicted morality in authority foundation, indicating that participants high in neuroticism, benevolence, achievement, tradition and conformity endorsed authority less. Moreover, universalism and self-direction positively and significantly predicted morality in authority foundation, indicating that participants high in universalism and self-direction tended to endorse authority more,  $F(18, 353) = 12.89, p < .000, R^2 = .136$  (see Table 2.18).

Regarding the purity foundation, In Step 1, nationality negatively and significantly predicted morality in the purity foundation, indicating that Saudi participants tended to endorse purity more. Also, age positively and significantly predicted morality in the purity foundation, indicating that older participants tended to endorse purity more,  $F(3, 368) = 48.81, p < .000, R^2 = .285$ . In Step 2, the openness trait negatively and significantly predicted morality in purity foundation, indicating that participants high in openness tended to endorse purity less. Extraversion and conscientiousness trait positively and significantly predicted morality in purity foundation, indicating that participants high in extraversion and conscientiousness tended to endorse purity more,  $F(8, 368) = 21.90, p < .000, R^2 = .041$ . In Step 3, tradition and conformity values negatively and significantly predicted morality in purity foundation, indicating that participants high in conformity and tradition endorse purity less, and universalism value positively and significantly predicted morality in purity foundation, indicating that participants high in universalism tended to endorse purity more,  $F(18, 353) = 14.35, p < .000, R^2 = .097$  (see Table 2.19).

Table 2.10 *Result of Hierarchical Regression Analysis Predicting harm in moral relevance*

Independent Variables	Harm in moral relevance	
	$\beta$	$R^2$ , $p$
Step 1		.202, .000
Nationality	.457**	
Gender	.057	
Age	.042	
Step 2		.060, .000
Nationality	.378	
Gender	.060	
Age	.033	
Conscientiousness	.108*	
Agreeableness	-.054	
Extraversion	.088	
Openness	.190**	
Neuroticism	.153**	
Step 3		.037, .000
Nationality	.326	
Gender	.065	
Age	.011	
Conscientiousness	.069	
Agreeableness	-.098*	
Extraversion	.106	
Openness	.151	
Neuroticism	.141	
Achievement	-.006	
Benevolence	.003	
Stimulation	.085	
Conformity	-.27	
Hedonism	-.031	
Power	.113	
Universalism	-.149*	
Tradition	.019	
Self-Direction	-.054	
Security	.000	

\*  $p < .05$  \*\*  $p < .01$

Table 2.11 *Result of Hierarchical Regression Analysis Predicting fairness in moral relevance*

Independent Variables	Fairness in moral relevance	
	$\beta$	$R^2, p$
Step 1		.097, .000
Nationality	.278**	
Gender	.177**	
Age	.013	
Step 2		.036, .000
Nationality	.210	
Gender	.167	
Age	-.004	
Conscientiousness	.083	
Agreeableness	-.029	
Extraversion	.010	
Openness	.186**	
Neuroticism	.054	
Step 3		.052, .000
Nationality	.163	
Gender	.155	
Age	-.028	
Conscientiousness	.036	
Agreeableness	-.069	
Extraversion	.017	
Openness	.099	
Neuroticism	.057	
Achievement	.047	
Benevolence	-.005	
Stimulation	.081	
Conformity	-.107	
Hedonism	-.026	
Power	.056	
Universalism	-.072	
Tradition	.128	
Self-Direction	-.218**	
Security	.007	

\*  $p < .05$  \*\*  $p < .01$

Table 2.12 *Result of Hierarchical Regression Analysis Predicting ingroup in moral relevance*

Independent Variables	Ingroup in moral relevance	
	$\beta$	$R^2, p$
Step 1		.069, .000
Nationality	-.240**	
Gender	.089	
Age	-.042	
Step 2		.023, .000
Nationality	-.227	
Gender	.096	
Age	-.051	
Conscientiousness	.108*	
Agreeableness	-.097	
Extraversion	.006	
Openness	-.047	
Neuroticism	-.024	
Step 3		.036, .000
Nationality	-.180	
Gender	.078	
Age	-.061	
Conscientiousness	.088	
Agreeableness	-.108*	
Extraversion	-.025	
Openness	-.002	
Neuroticism	-.049	
Achievement	.019	
Benevolence	.001	
Stimulation	-.057	
Conformity	-.222*	
Hedonism	.009	
Power	-.002	
Universalism	.068	
Tradition	.011	
Self-Direction	-.001	
Security	-.009	

\*  $p < .05$  \*\*  $p < .01$

Table 2.13 *Result of Hierarchical Regression Analysis Predicting authority in moral relevance*

Independent Variables	Authority in moral relevance	
	$\beta$	$R^2, p$
Step 1		.046, .001
Nationality	-.197**	
Gender	.066	
Age	-.056	
Step 2		.016, .003
Nationality	-.190	
Gender	.080	
Age	-.053	
Conscientiousness	.065	
Agreeableness	-.098	
Extraversion	.052	
Openness	-.056	
Neuroticism	.031	
Step 3		.111, .000
Nationality	-.092	
Gender	.052	
Age	-.113*	
Conscientiousness	-.014	
Agreeableness	-.131**	
Extraversion	.073	
Openness	-.016	
Neuroticism	.008	
Achievement	.120	
Benevolence	.093	
Stimulation	-.005	
Conformity	-.295**	
Hedonism	.071	
Power	.035	
Universalism	.058	
Tradition	-.030	
Self-Direction	-.140*	
Security	-.169*	

\*  $p < .05$  \*\*  $p < .01$

Table 2.14 *Result of Hierarchical Regression Analysis Predicting purity in moral relevance*

Independent Variables	Purity in moral relevance	
	$\beta$	$R^2$ , $p$
Step 1		.242, .000
Nationality	.478**	
Gender	.090*	
Age	-.034	
Step 2		.016, .000
Nationality	-.478	
Gender	.098	
Age	-.031	
Conscientiousness	.077	
Agreeableness	-.073	
Extraversion	.091	
Openness	-.003	
Neuroticism	.045	
Step 3		.075, .000
Nationality	-.409	
Gender	.087	
Age	-.063	
Conscientiousness	.033	
Agreeableness	-.115*	
Extraversion	.107	
Openness	.066	
Neuroticism	.025	
Achievement	.038	
Benevolence	.104	
Stimulation	.058	
Conformity	-.236**	
Hedonism	-.057	
Power	.093	
Universalism	.034	
Tradition	-.102	
Self-Direction	-.083	
Security	-.053	

\*  $p < .05$  \*\*  $p < .01$

Table 2.15 *Result of Hierarchical Regression Analysis Predicting harm in moral judgment*

Independent Variables	Harm in moral judgment	
	$\beta$	$R^2, p$
Step 1		.030, .010
Nationality	-.073	
Gender	-.150**	
Age	.059	
Step 2		.043, .000
Nationality	-.118*	
Gender	-.132	
Age	.057	
Conscientiousness	.124*	
Agreeableness	-.066	
Extraversion	.113	
Openness	.087	
Neuroticism	.170**	
Step 3		.133, .000
Nationality	-.152	
Gender	-.133	
Age	.052	
Conscientiousness	.060	
Agreeableness	-.150**	
Extraversion	.037	
Openness	.080	
Neuroticism	.099	
Achievement	-.050	
Benevolence	-.143*	
Stimulation	.034	
Conformity	-.072	
Hedonism	-.097	
Power	.159**	
Universalism	-.168	
Tradition	-.012	
Self-Direction	.029	
Security	-.034	

\*  $p < .05$  \*\*  $p < .01$

Table 2.16 *Result of Hierarchical Regression Analysis Predicting fairness in moral judgment*

Independent Variables	Fairness in moral judgment	
	$\beta$	$R^2, p$
Step 1		.008, .375
Nationality	.076	
Gender	.054	
Age	.039	
Step 2		.020, .240
Nationality	.065	
Gender	.071	
Age	.029	
Conscientiousness	.122*	
Agreeableness	-.005	
Extraversion	.021	
Openness	.018	
Neuroticism	.109	
Step 3		.177, .000
Nationality	.064	
Gender	.069	
Age	.056	
Conscientiousness	.061	
Agreeableness	-.075	
Extraversion	-.051	
Openness	-.026	
Neuroticism	.068	
Achievement	-.175*	
Benevolence	-.065	
Stimulation	-.058	
Conformity	.119	
Hedonism	.010	
Power	.084	
Universalism	-.225**	
Tradition	-.118	
Self-Direction	.031	
Security	-.010	

\*  $p < .05$  \*\*  $p < .01$



Table 2.17 *Result of Hierarchical Regression Analysis Predicting ingroup in moral judgment*

Independent Variables	ingroup in moral judgment	
	$\beta$	$R^2, p$
Step 1		.051, .000
Nationality	-.195**	
Gender	.097	
Age	-.050	
Step 2		.077, .000
Nationality	-.096	
Gender	.112*	
Age	-.018	
Conscientiousness	.035	
Agreeableness	-.031	
Extraversion	.222**	
Openness	-.193**	
Neuroticism	-.009	
Step 3		.153, .000
Nationality	.008	
Gender	.089	
Age	-.019	
Conscientiousness	-.016	
Agreeableness	-.045	
Extraversion	.144	
Openness	-.018	
Neuroticism	-.103	
Achievement	-.160*	
Benevolence	-.153*	
Stimulation	-.121	
Conformity	-.267**	
Hedonism	.127*	
Power	.041	
Universalism	.129	
Tradition	-.121	
Self-Direction	.247**	
Security	-.035	

\*  $p < .05$  \*\*  $p < .01$

Table 2.18 *Result of Hierarchical Regression Analysis Predicting authority in moral judgment*

Independent Variables	Authority in moral judgment	
	$\beta$	$R^2$ , $p$
Step 1		.223, .000
Nationality	-.429**	
Gender	.047	
Age	.126**	
Step 2		.038, .000
Nationality	-.354	
Gender	.061	
Age	.128	
Conscientiousness	.114*	
Agreeableness	.036	
Extraversion	.075	
Openness	-.127**	
Neuroticism	-.004	
Step 3		.136, .000
Nationality	-.219	
Gender	.039	
Age	.137	
Conscientiousness	.076	
Agreeableness	.025	
Extraversion	.012	
Openness	.069	
Neuroticism	-.087	
Achievement	-.146*	
Benevolence	-.129*	
Stimulation	.033	
Conformity	-.242**	
Hedonism	-.016	
Power	.008	
Universalism	.216**	
Tradition	-.120*	
Self-Direction	.152**	
Security	-.061	

\*  $p < .05$  \*\*  $p < .01$

Table 2.19 *Result of Hierarchical Regression Analysis Predicting purity in moral judgment*

Independent Variables	Purity in moral judgment	
	$\beta$	$R^2$ , $p$
Step 1		.285, .000
Nationality	-.508**	
Gender	-.037	
Age	.109*	
Step 2		.041, .000
Nationality	-.441	
Gender	-.014	
Age	.117	
Conscientiousness	.118**	
Agreeableness	.010	
Extraversion	.100*	
Openness	-.140**	
Neuroticism	.053	
Step 3		.097, .000
Nationality	-.340	
Gender	-.038	
Age	.096	
Conscientiousness	.083	
Agreeableness	-.011	
Extraversion	.056	
Openness	-.020	
Neuroticism	.005	
Achievement	-.015	
Benevolence	-.033	
Stimulation	-.105	
Conformity	-.255**	
Hedonism	.089	
Power	.033	
Universalism	.139*	
Tradition	-.160**	
Self-Direction	.042	
Security	-.017	

\*  $p < .05$  \*\*  $p < .01$

## **Discussion**

### **Moral relevance and moral judgment**

The first goal of this study was to understand people's moral judgment in Saudi Arabia and the UK. I drew on Moral Foundation Theory (MFT; Graham et al., 2009, 2011) to investigate cross-cultural differences in morality between Saudi Arabia and the UK and to investigate the effects of personality traits and values on morality. MFT was created to widen the moral domain and to potentially capture variations and similarities in morality across cultures. According to Graham et al. (2009, 2011), the moral domain includes five moral concerns or foundations. The harm/care foundation is related to disapproval of, avoiding, and ameliorating pain and misery in others (Koleva et al., 2012). The fairness/reciprocity foundation is related to equality and justice and seeks that these principles not be violated. The ingroup/loyalty foundation is related to our relation to groups such as our family or our country, and seeks to promote the group's cohesion and well-being. The authority/respect foundation is related to status differences between people and within societies. The purity/sanctity foundation is related to the emotion of disgust that is associated with biological and social contaminants (Koleva et al., 2012). In line with MFT and the hypotheses, this study found cross-cultural differences in people's endorsement of the five moral foundations. Participants from Saudi Arabia endorsed the ingroup, authority, and purity foundations more than UK participants, whereas there was a similar endorsement of harm and fairness foundations in both samples. This indicates that UK and Saudi participants have the ability to feel and dislike the pain of others and seeks that principles like equality and justice not to be violated. On the other hand, Saudi participants seek to promote the group's cohesion and well-being, seek to follow authorities' norms and rules, but authorities also have a duty to support the well-being of its group, and seek to avoid immoral

activities and contaminants that might desecrate the body. In that sense, the moral domain is “wider” in Saudi Arabia (where it additionally includes ingroup, authority, and purity concerns) than in the UK (where it mainly draws on harm and fairness concerns). Like for moral relevance, moral judgment results showed similarities between Saudi and UK participants in the harm and fairness foundations. However, the findings revealed that the endorsement of ingroup, authority, and purity were higher among Saudi participants than UK participants.

These results are in line with Graham and colleagues’ (2011) work. They found that participants in eastern cultures such as East Asia and Southeast Asia showed higher endorsement of purity and ingroup foundations than did participants in western cultures such as United Kingdom and Canada. Similarly, Kim et al. (2012) found that Korean participants endorsed purity concerns more than American participants. Another study that supports the current results is by Zhang and Li (2015). They examined cultural differences in moral foundations endorsement between Chinese and western cultures and found that Chinese people endorsed more of the ingroup, authority, purity foundations and less of the harm and fairness foundations. As of yet, no study has investigated moral foundations theory in depth in a Middle Eastern context.

The largest cross-cultural differences were found on the dimension of moral endorsement. However, Stankov and Lee’s (2016) study found that the smallest cross-cultural differences were detected in morality among nastiness and religiosity. The differences in moral foundations scores between the two countries might be due to the fact that Saudi Arabia is considered collectivist country while the UK is considered individualist country based on Hofstede’s (1980) study (see also [www.geerthofstede.com](http://www.geerthofstede.com)). The three moral foundations ingroup, authority, purity are all linked to collectivistic cultures where Saudi scored higher on all three foundations. The two

moral foundations harm and fairness are linked to individualistic cultures where UK scored higher on the two foundations. However, in this study we found that UK participants scored higher in horizontal individualism and horizontal collectivism, while Saudi participants scored higher in vertical individualism. No country differences in vertical collectivism emerged.

The difference between UK sample and Saudi sample in the binding moral foundations (authority, purity, ingroup) might be related to the different role religion plays in individuals' morality. Various researchers have shown that religion often plays a role in people's moral lives (e.g., Colby & Damon, 1992; Shweder et al., 1997). Shah (2004) suggested that religiosity strongly influences the moral behaviour of teenagers. In our study each sample has different religion which might be the reason for the differences in authority, purity, and ingroup foundations. For example, Islam religion encourages group cohesiveness. Furthermore, purity items in moral foundations questionnaire such as "whether or not someone acted in a way that God would approve of" are linked to the religiosity of Christian or Muslim but were not a good measure of religiosity of Buddhists and atheists (Zhang & Li, 2015).

### **The effect of values and personality traits on moral foundations**

The second goal of this study was to investigate whether and how personality traits and cultural values affect moral judgment. This research question was partly supported by previous studies in the field of personality and values (Sverdlik et al., 2012). However, previous studies have not simultaneously considered personality traits, cultural values, and morality, thus have not explained the effects that personality and values might have on morality. We expected personality traits and values to contribute differently to moral relevance and moral judgment. From a theoretical perspective, personality and values are believed to be similar in the nature and the content of certain traits and values (Parks-Leduck et al., 2015). All values are based on

cognition while only some personality traits based on cognition such as openness to experience and agreeableness. Furthermore, there is a similarity in the content between personality traits and cultural values. For example, openness to experience and self-direction shares the same concept as they both relate to curiosity and creativity. Our findings showed that personality traits and cultural values have different effects on moral relevance and moral judgment in the moral foundations. Harm and fairness endorsements and moral judgments were predicted by personality traits while ingroup, authority, and purity predicted by cultural values.

Haidt, Graham, and Joseph (2009) explored the relationship between ideologies and moral foundations. They found that a first group of people they labelled “secular liberal” were high in harm and fairness foundations and high in openness to experience. The second group labelled “social conservatives” were high in ingroup, authority, and purity foundations and were low in openness to experience. The third group labelled “libertarians” were low on all moral foundations but they valued hedonism and self-direction values. The fourth group labelled “religious left” were high on all moral foundations and on benevolence, conformity, tradition, and security values. In conclusion, harm and fairness foundations were related positively with the openness to experience trait, and ingroup, authority, purity were related negatively with the openness to experience trait. All five moral foundations were related negatively with hedonism and self-direction values, and all five moral foundations were related positively with benevolence, tradition, conformity, and security values. These findings, thus, showed some similarity to the present study’s findings.

**Personality traits and morality.** Regarding the effect of personality traits on *moral relevance*, participants high in conscientiousness, neuroticism and openness endorsed the relevance of harm more. Regarding moral judgment, the harm foundation was affected by

neuroticism and conscientiousness traits in a positive way. These results are partly in line with McFerran et al.'s (2010) descriptions of the moral personality which includes traits, such as conscientiousness and openness to experience. They also support Haidt et al.'s (2009) study that showed that individuals high in harm and fairness foundations were high as well in openness to experience. Stojiljkovic (1998) assumed that moral judgment in general related to basic personality traits such as extraversion and neuroticism. Unexpectedly, participants high in agreeableness endorsed the harm moral foundation less. Even though prosocial behaviour can be considered as a type of agreeableness and expected to be related to avoiding harm, Albright et al. (1988) and Watson (1989) assumed that agreeableness may be less distinguished as an individual difference than other traits such as extraversion.

Concerning fairness, participants high in openness endorse fairness more in their moral relevance and judgments. These results are in line with Haidt et al. (2009) who showed that individuals who endorsed harm and fairness foundations were high in openness to experience. Furthermore, participants high in conscientiousness endorsed fairness more in their moral judgment. These results fit with McFerran et al.'s (2010) descriptions of the moral personality. Harm and fairness foundations are related to the dimension of equality and focus on the rights of the individual (Federico et al., 2013; Jost et al., 2003). In this study, they were related to those personality traits that show a caring for other cares most about the individuals.

Moral relevance of the ingroup, authority, purity foundations were not affected by any personality traits, but were related to the value dimension of openness versus conformity and a focus on communal bonds (Federico et al., 2013, Jost et al., 2003). Furthermore, they were related negatively with traits that care about the individual such as openness to experience, conscientiousness, and neuroticism. The three binding foundations were related to values that



focus on the wellbeing of the group, such as obedience, safety for self, others, and nation, social justice, and enjoying life.

Concerning moral judgment, the ingroup foundation was affected by openness in a negative way and extraversion trait in a positive way. Participants high in openness tended to endorse ingroup less, while participants high in extraversion tend to endorse ingroup more. Being high in extraversion means being sociable, outgoing, and talkative which resemble ingroup foundation characteristics. While being high in openness trait means being intellectual, imaginative, and flexible which is the opposite of ingroup foundation description. Stojiljkovic (1998) assumed that moral judgment in general related to basic personality traits such as extraversion and neuroticism.

Moral judgment in the authority foundation was affected by conscientiousness trait in a positive way and openness trait in a negative way. Participants high in conscientiousness tended to endorse authority more while participants high in openness tended to endorse authority less. Being high in conscientiousness means being organized, responsible, dependable which is similar to authority foundation description (Graham et al., 2011), while being high in openness trait means being curious, creative, and flexible which is the opposite of authority foundation description.

Finally, moral judgment in the purity foundation was affected by conscientiousness and extraversion traits in a positive way and openness in a negative way. Participants high in extraversion and conscientiousness tended to endorse purity more while participants high in openness tended to endorse purity less. Being high in conscientiousness and extraversion means being optimistic, reward-seeking, neat, and efficient which is similar to purity foundation description, while being high in openness means being curious, creative, and flexible and this is

the opposite of purity foundation description. Stojiljkovic (1998) assumed that moral judgment in general related to basic personality traits such as extraversion and neuroticism.

**Cultural values and morality.** With respect to the effect of cultural values on moral relevance, participants high in universalism endorse harm less, those high in conformity endorsed ingroup less, and participants high in conformity, self-direction, and security endorsed authority less. Moral relevance in the purity foundation was affected by conformity values in a negative way. Participants high in self-direction endorsed fairness less.

Regarding the effect of cultural values on moral judgment, harm foundation was affected by benevolence value in a negative way and power value in a positive way. The fairness foundation was affected by universalism and achievement values in a negative way. Participants high in benevolence, achievement, and conformity tended to endorse ingroup less while participants high in hedonism and self-direction tend to endorse ingroup more. Moral judgment in the authority foundation was affected by benevolence, achievement, conformity, and tradition values in a negative way and universalism, self-direction values in a positive way. Participants high in conformity and tradition endorsed purity less while participants high in universalism tended to endorse purity more.

Despite the logical relationship between moral foundations and values, these results do not support our hypothesis and contradicted the results of Graham et al. (2007) and Sverdlik et al. (2012). Values did not have consistent effect on moral judgment across different countries. These results are based on empirical data collected from two countries only. Evidence from diverse countries might help a clear relationship to exist. Moreover, the way values operate in UK and Saudi Arabia was not similar. Values' predictive ability for moral endorsement and moral judgment might differ from country to country.

A pattern seems to emerge that moral judgment and moral relevance in the harm and fairness foundations seemed to be better predicted by openness to experience, conscientiousness, and neuroticism traits, whereas ingroup, authority, and purity seem to be better predicted by conformity, self-direction, security, hedonism, and universalism values.

The findings of this study suggested that the content of personality traits and cultural values do not overlapped indicating that personality traits and cultural values are two different constructs and would relate to other variables, such as people's preceptions of moral relevance and moral judgment, differently. Traits are considered fundamental determinants of behaviour, and are the basis of behavioural consistency over different situations and time (Parks-Leduc et al., 2015; Waters, 1981). In addition, personality traits can be described as heritable but at the same time immune to social influences, such as parents and society, and stable throughout adulthood (Caspi et al., 2005; Olver & Mooradian, 2003). These descriptions of personality traits suggest that traits would relate more to the basic moral foundations harm and fairness. Furthermore, studies in western cultures have found a positive relationship between conscientiousness, agreeableness, openness to experience and justice-based moral judgment (McFerran et al., 2010). On the other hand, values are assessments because they direct people's judgment in terms of their own and others' suitable behaviour. Values are situation-general because they arise across specific situations, and they can be arranged by personal importance, so people will act according to the most important values first. The characterization of values suggests that values would relate more to the additional moral foundations such as ingroup, authority, and purity.

### **Trait- value relationships**

The third goal of this study was to investigate whether personality traits and cultural values are related differently or similarly across Saudi and UK cultures. Previous research (e.g.,

Olver & Mooradian, 2003; Parks, 2009) found that personality traits and cultural values have meaningful relationships. The strength of these relationships was based on two factors: the nature of the traits and the content overlap between personality traits and cultural values. The excitement-seeking facet of the openness to experience trait correlated most strongly with stimulation. Unexpectedly, the findings of the current study showed that openness correlated negatively with stimulation. This could be attributed to the small number of items that represent stimulation in the PVQ. The results in previous studies had limited generalizability because they studied only one sample such as Israeli students, German managers, Finnish military officer, or Italian general population. It is possible that the 10 values and five personality factors relate differently in other cultural samples. Furthermore, there are only few items that represent stimulation in the PVQ compared to other values such as universalism. Overall, the findings from this study suggest that the content of personality traits and cultural values do not overlap. Moreover, the pattern of the results suggests that personality traits and cultural values are two different constructs.

**Cultural differences in personality traits and cultural values.** Concerning cross-cultural differences, UK participants were higher in openness to experience trait and neuroticism than Saudi participants as expected. This finding indicates that UK participants have the ability to be imaginative, creative, and flexible. However, Saudi participants were higher in extraversion and conscientiousness as expected by Mustafa and Bato's (2005) study. This finding suggests that Saudi participants have the ability to be sociable, reward seeking, and energetic. No cross-cultural differences in agreeableness were found. These cross-cultural differences in personality traits can be interpreted in light of Mustafa and Bato (2005) who examined the relationship between five factor model and accumulative self-evaluation on 400 undergraduate Iraqi students.

They found that the most common traits among Iraqi students were as follow: consciousness, extraversion, openness to experience, agreeableness, and neuroticism. Our results regarding UK sample partly supported by Allik and McCrae`s study (2004). Allik and McCrae (2004) explored the geographical distribution of personality traits across thirty six cultures and found that European and American cultures are higher in extraversion and openness to experience and lower in agreeableness, while in our study UK participants were higher in openness to experiences and neuroticism.

Concerning values, UK participants were higher in security, tradition, conformity, power, achievement, and hedonism values than Saudi participants. Saudi participants were higher in universalism value. However, UK and Saudi Participants were similar in benevolence, stimulation, and self-direction values. Even though there were cross-cultural differences in the ten values, Saudi and UK participants were quite similar in the importance ranks for the ten values. For example, power and tradition values were the most important values for both samples, and benevolence value was the least important value for both samples. This contradicts Schwartz`s (2012) assumption that benevolence, universalism and self-direction are the most important values, and power and stimulation values are the least important values.

No previous studies investigated the topic of values in Saudi Arabia. However, my UK findings are not in line with those found in earlier research in western societies. Schwartz (2008) assumed and found that western Europeans prioritize values such as benevolence, universalism, self-direction, stimulation, and hedonism which promote people to take individual responsibility for their actions and make decisions based on their own personal understanding of situations. In this study, UK participants` focused on values that promote a person`s roles in and obligations to collectivistic are more important than unique ideas and aspirations. The reason for higher scores

in self-enhancement and conservation values in UK participants is that UK participants are higher in both horizontal individualism and horizontal collectivism indicating that individuals see themselves as part of a collective and as fully autonomous. Self-enhancement values regulate how a person expresses personal interest while conservation values regulate how a person relates socially to others. Based on these results, we can assume that UK is slightly shifting from being individualistic society to collectivistic society. Another reason for these unexpected results is that the sample consisted only of students and was mostly female. Students at this age attribute great importance to group solidarity, smooth group work, and group interest which represent the description of power and tradition values (Schwartz, 2012). Schwartz (2013) proposed that security values received higher importance ranking by females in 87 samples.

### **Limitations and conclusions**

This study attempted to add to the field of moral psychology. First, this study revealed cross-cultural differences regarding endorsement of moral judgment in the five foundations foundation in a Western-European and Middle Eastern culture. Second, this study provides explanations regarding the effects of values and traits on morality. Third, this study has been important in providing explanations regarding the relationship between personality traits and cultural values from cross-cultural perspective.

There are several issues that limit the interpretation of the current findings. First, the data were not from representative samples as participants were students at university in both samples. Second, the study employed self-report questionnaires in collecting data, which can be subject to social desirability. Third, the measures employed in this study were designed in western cultures and applied in western and non-western cultures. Applying western measures in non-western

cultures could result in biased findings because it is not designed to fit non-western cultures. This is a particular issue with regard to the morality scales which were developed in a Western-Christian culture and then applied in a Middle Eastern culture with participants having non-Christian beliefs.

One way to overcome some of the limitations of the current investigation is to move beyond self-report measures of morality. The next two sets of studies in this dissertation do just that by focusing on actual moral behaviour. In that way, some of the limitations of the current research are explored from a different angle, thus avoiding some of the issues associated with using self-report measures only.

## **Chapter 3:**

### **Study 2: Moral foundations and prosocial behaviour. The impact of moral identity and culture.**

#### **Introduction**

The results of Study 1 revealed that the endorsement of ingroup, authority, and purity foundations was higher among Saudi participants. There was no difference in the endorsement of moral foundations related to harm and fairness. This supports Graham et al. (2011) who found that Asian participants were significantly more concerned about ingroup and purity concerns than participants from western societies. Study 1 also found that values and personality traits predicted moral judgments in the five domains. Harm and fairness foundations were predicted by personality traits while ingroup, authority, and purity foundations were predicted by cultural values. In Study 2 we focused on related, but different questions. First we were interested in whether the cross-cultural differences found in Study 1 concerning the five moral foundations would not only hold for moral judgments, but people's actual moral behaviour. Second, we examined whether the moral judgments in the five moral foundations also predicted people's actual moral behaviour. Third, we investigated whether participants' general and personal moral values (or their moral identity) mediated the relationship between moral judgment and moral behaviour.

#### **Moral Behaviour**

Much of the research in moral psychology has focused on how people make moral judgments, how they reason about moral choices, and whether they engage in (hypothetical) moral



behaviour (see Killen & Smetana, 2006). Moral behaviour can be defined, according to Trevino et al. (2006), as actions that are judged based on appropriate moral standards of actions. While Kohlberg and Candee (1984) assumed that a moral action is one that is motivated by a moral reason and thus that higher level moral reasoning is correlated with moral behaviour, results on the relationship between moral reasoning level and moral behaviour are mixed (Fodor, 1972). A host of studies has shown that moral reasoning (or reasoning-based moral judgment) is only moderately related to moral behaviour. For example, scores on tests measuring moral reasoning and moral judgment are not usually correlated with inclinations to behave in moral way such as helping others or following the rules (Richards et al., 1992). Gummerum et al. (2008) and Takezawa et al. (2006) showed that children's, adolescents', and adults' costly sharing of resources was not predicted by moral reasoning skills. On the other hand, a negative correlation between moral reasoning and delinquency has been found (Blasi, 1980; Gregg, Gibbs, & Basinger, 1994). Blasi (1999) assumed that moral understanding alone cannot demonstrate moral behaviour or motivation (Johnston, 2009). Thus, moral behaviour, especially costly moral behaviour, might be motivated by factors other than moral reasoning ability. In Study 2, we will particularly focus on general and personal moral values as variables mediating the relationship between moral reasoning and moral behaviour (see below).

Moral behaviour has been investigated with different methods, such as self-reports, questionnaires (e.g., Johnston & Krettenauer, 2011), measuring of charitable giving (Aquino & Reed, 2002), and observations of relevant behaviours, such as helping or sharing (especially in young children; e.g., Eisenberg et al., 2002; Warneken & Tomasello, 2007). Furthermore, relevant clinical conditions and behaviours (such as psychopathy, conduct disorders, or aggression) and delinquency have been used as a proxy for immoral behaviour (e.g., Arsenio,

Gold, & Adams, 2004; Blair, 1995; & Gregg et al., 1994). More recently, psychologists have increasingly used experimental games, originally developed in mathematics and economics, to study moral, and particularly prosocial, behaviour. Study 2 will draw on experimental games measures to assess moral behaviour relevant to the five moral domains.

**Experimental games.** Originally a branch of mathematics, game theory analyses decision making in social situations. A game is supposed to be an idealized abstraction of a specific social situation with explicitly defined basic elements: It involves two or more decision makers, called players; each player can choose among two or more ways of acting (i.e., strategies), and the outcome or payoffs of the interaction depends on the choices of all players (see Camerer, 2003; Colman, 1995; Gummerum et al., 2010; Kagel & Roth, 1995; for reviews). To be scientifically relevant, a game has to include all the important properties of the social situation and model the interaction accurately (Colman, 1995). Of particular interest to moral psychologists are so-called mixed-motive games. In these games, the players' motivations lie somewhere between cooperation and competition (Colman, 1995). Thus, these games offer the opportunity to assess behaviours relevant to morality, since in many of these games, as in moral situations, people have "to suppress or regulate selfishness and make social life possible" (Haidt, 2008, p. 70).

One mixed-motive game that has been used for over three decades to examine costly prosocial behaviour is the dictator game (Forsythe et al., 1994; Kahneman, Knetsch, & Thaler, 1986). The dictator game is about resources distribution and involves two players who are presented with valuable and dividable resources (e.g., a sum of money). The first player, the dictator, can decide how to allocate the resources between him-/herself and another player, the receiver. The dictator can keep whatever remaining amount s/he does not want to give to the receiver, and the receiver

obtains the resources allocated to him/her by the dictator. The receiver can only accept the resource allocation by the dictator. In the original dictator game set-up, the players are anonymous to one another and interact only once. From a rational-choice perspective, giving anything to the receiver has no monetary or social advantages, and the dictator should thus not give anything to the receiver (Camerer, 2003; Coleman, 1995). Yet, adult dictators give on average between 20 and 30% of the original resources with the modal offer being either nothing or half (e.g., Forsythe, Horowitz, Savin, & Sefton, 1994; Hoffman, McCabe, Shachat, & Smith, 1994). Any positive offers by the dictator have thus been regarded as an indication of the dictator's preferences for prosociality or fairness (Camerer, 2003). Forsythe et al. (1994) employed dictator game to measure whether people's fairness affect nontrivial offers in economic games, such as dictator games, and found that fairness alone cannot explain the observed behaviours. Kahneman et al. (1986) used dictator games to examine resistance to unfairness. They found that judgments of fairness and fairness behaviour are affected by framing in these economic games. The attractiveness of games such as the dictator game for moral psychology comes from the fact that game decisions are real; players offer real resources, and their decisions have real consequences. The game decisions reflect a realistic view of the nature of the human behaviour (Macro & Weesie, 2016). People's behaviour during the game is a real behaviour because it affects them directly in reality. However, there are many unrealistic aspects of these games such as the money allocated is not earned by players themselves but was giving by the experimenter and the fact that the behaviour was measured in the lab rather than in real interactions.

In the original version of the dictator game players are anonymous and no information about their partner is provided to players. However, a number of studies (see Camerer, 2003 for a

review) found that the framing of the dictator game situation strongly affects dictators' allocations. For example, Eckel and Grossman (1998) either told dictators that their allocations would go to charity or kept the original anonymous receiver. Dictators were significantly more generous in the charity condition, with almost 20% of participants giving more than half to charity. Similarly, Keller et al. (2013) showed that even in anonymous dictator game situations, children, adolescents, and adults frame the situation and construct an identity for the receiver. These constructions affect their offers. For example, when the receiver is constructed as a needy person, dictators argue for allocating more money than when the receiver is constructed as a person from the dictator's outgroup. In the current study, we will draw on these framing effects to conceptualize the dictator game situation in line with the different moral foundations.

**Moral behaviour and moral foundations.** Only a handful of studies investigated moral behaviour in relation to the moral foundations. Teo and Chan-Serafin (2013) explored the relationship between unethical pro-organizational actions and moral foundations. They found that unethical pro-organizational actions were related to five moral foundations. This study shows that members of an organization who are high in binding foundations (ingroup, authority, and purity) and low in individualising foundations (harm and justice) were more willing to engage in unethical actions to profit their organization. These results suggest that unethical leadership might negatively impact people who value binding foundations (e.g., they have respect for authority) more than those who value individualising foundations.

Schier et al. (2016) investigated the link between self-reported moral fairness foundation and prosocial behaviour in dictator game. They hypothesized that allocation in dictator game increases when fairness foundation increases. They found that moral fairness foundation was positively related to prosocial giving in the dictator game and fairness foundation scores had a

positive significant influence on allocation in the dictator game. In other words, people high in the fairness moral foundation donated more in dictator game.

Moral foundations theory helps to explain why and when individuals donate money to charity. Nilsson et al. (2016) examined the link between moral foundations and ingroup and outgroup focused charitable giving. This study used different methods to measure intentions to donate such as self-reported donations and actual donations. They found that harm and fairness foundations predicted higher donations in general across self-report and experimental data. Ingroup, authority, and purity foundations predicted higher donations to ingroup causes only. For example, in this study a medical student group who are high in ingroup, authority, and purity foundations donated more to cancer treatment charity than to hunger relief charity.

A study by Kim et al. (2013) showed that, on a sample of twenty four undergraduate students, participants were less sensitive to fairness when they decide for a stranger as they rejected few unfair offers compared to decisions made to themselves or their best friend. The only possible interpretation for this finding is that social distance drives people to be freer from issues related to unfairness. Kim et al. (2013) assumed that social distance encourages individuals to be freed from fairness concerns when deciding in fairness situations.

## **Moral identity**

As discussed above, the relationship between moral reasoning, moral judgment, and moral behaviour is not a straightforward one (see Bergman, 2002, for an overview of theoretical models). Various factors influence moral behaviour, besides moral reasoning (Kohlberg, 1969), such as emotions (Eisenberg, 2000; Hoffman, 2000), cognitive abilities (e.g., perspective-taking, ego strength; Rest, 1984), and moral identity (Blasi, 2005). One of the variables studied in Study

2 is moral identity or personal moral values. Moral identity or the strength of personal moral values is defined as the ideas an individual holds about his or her moral character. For example, if an individual identifies him-/herself as a fair person s/he should try to act in a fair way to maintain self-consistency (Aquino et al., 2009). In contrast, an individual for whom fairness is less central to their identity or self-concept should be less likely to act in a fair way. Moral identity is considered a strong source of moral motivation as individuals try to keep consistence between their personal moral values and their moral actions (Blasi, 1980, 1993, 2004).

The self-significance of moral values has a demonstrated relationship with prosocial behaviour. Reed (2002) explained that there is a relationship between self-importance of moral values to a person's identity and various behaviours such as volunteering. Hart et al. (1995) revealed that individuals who cared about others were more likely to use moral values and moral traits to describe themselves. Research by Prat et al. (2003) revealed that high self-importance of moral values was a predictive factor of prosocial behaviour. Correlational studies (e.g., Aquino & Reed, 2002; & Hardy, 2006) showed that moral identity was linked to moral behaviour, such as money donations to charity and selfless help. However, the nature of the relationship between moral identity and moral behaviour is still ambiguous. It might be that moral identity motivates moral behaviour or that moral behaviour sets individuals in moral atmosphere (Hardy & Carlo, 2011).

Aquino et al. (2009) examined the effect of situational factors and moral identity on moral behaviour. The results of Aquino et al. Studies 1 and 2 showed that situational factors and the personal importance of moral values influenced intentions to engage in moral behaviour. In Study 3, this relationship was examined but with actual behaviours. The results showed that the existence of situational factors (financial incentives) increased individual's intentions to lie to another person even for individuals high in moral identity centrality. Study 4 combined all three

previous studies to examine two situational factors such as a moral prime that should increase moral behaviour and feedback about the selfish behaviour of others that should increase self-interested behaviours. Findings showed that participant with high moral identity centrality showed higher levels of prosocial behaviour. However, prosocial behaviour was decreased by the feedback of selfish behaviour of others. These results show that the influence of moral identity on moral behaviour is dependent on the accessibility of moral identity.

It is assumed that moral identity is stable across situations but that it develops with age (Blasi, 2004; Moshman, 2005). Even though moral identity is stable, it might be activated in certain situations (Aquino et al., 2009; Stets & Carter, 2006). There is some evidence that moral identity is present during childhood (Thompson, 2009). For example, children can classify themselves as good or bad girls after obeying parents' rules (Kochanska, 2002). Moreover, emotions that are related to moral identity, such as empathy, guilt, and shame, are present in early life (Hoffman, 2000; Kochanska, 2002) which supports the presence of moral identity during childhood. Carlo (2006) assumed that adolescents are more sensible to what is expected from them, attitudes, and others' needs than children. The increasing amount of responsibility will enable the integration of morality and self during adolescence and adulthood (Nunner-Winkler, 2007).

People differ with regards to the content of their moral identity as well as the strength or centrality of certain moral values (see Narvaez & Lapsley, 2009). Thus, people can hold different values that are personally important to them and also differ in how personally important a specific value is. Thus, moral identity or personal moral values can be seen as an individual difference variable. There are relatively few studies on cross-cultural differences in moral identity. Jia (2016) examined the differences in moral identity between Canadian and Chinese participants. The findings showed that Chinese participants have broad definition of moral

identity. Furthermore, Chinese participants gave high importance to moral identity in the context of school and the context of community, more than Canadian participants. In conclusion, individuals seem to differ across cultures in their definition of moral identity. As of yet, to our knowledge no study has compared moral identity in western and Middle Eastern participants.

## **The Present Study**

The present study had three general goals: First, it assessed cross-cultural differences in moral behaviour specific to the five moral foundations. We drew on well-established framing effects in the dictator game situation (see Camerer, 2003) to create moral situations that corresponded to the five moral foundations. In line with our findings from Study 1 and Graham et al. (2011), we expected cross-cultural differences in moral behaviour related to the five moral foundations. We expected UK participants to engage in significantly more costly prosocial sharing in the harm and justice charity frame than in the ingroup, authority, and purity charity frame. In contrast, participants from Saudi Arabia should show no difference in their costly sharing across the five moral foundation frames.

Second, we examined whether the moral judgments in the five moral foundations also predicted people's actual moral behaviour, or whether, third, participants' general and personal moral values (or their moral identity) mediated the relationship between moral judgment and moral behaviour in the five moral foundations. Given the findings by Schier et al. (2016), we might expect that foundation-specific moral judgment predicts foundation-specific moral behaviour. For example, moral judgment in the ingroup foundation should predict costly sharing in the ingroup frame. However, given the substantive literature on the importance of the moral self for moral action (e.g., Hardy & Carlo, 2011), we might alternatively expect that moral judgment does not predict moral behaviour directly, but that the relationship between moral judgment and



moral behaviour is mediated by people's moral self (i.e., their personal moral values or moral identity) or their general values.

## **Method**

### **Participants**

The study comprised 102 participants. Adults aged 18 years and older participated. The Saudi sample consisted of 50 participants ( $M_{Age} = 30$  years,  $SD = 7.90$ , 21 females, 29 males). The British sample consisted of 52 participants ( $M_{Age} = 25$  years,  $SD = 8.79$ , 39 females, 13 males).

### **Procedure**

In the UK, participants were recruited through the University's participant pool which mainly contains students. In Saudi Arabia, participants were recruited by approaching students who were taking summer courses on campus. Those who agreed to participate from both samples were then invited to the lab.

Participants were presented with a brief of the study and were informed about the study, the anonymity of their data as well as their right to withdraw, after which they had to sign the consent form to be able to participate. The experiment started with the resource allocation task. The experimenter explained the task to the participants and gave examples. After the resource allocation task, participants had to fill in some demographic information and four questionnaires (Moral judgment, general values, personalized values, and individualism/collectivism) in counterbalanced order. At the end, participants were presented with a debrief and were paid a show-up fee as well as the money they accrued in the resource allocation task (see below). The whole study took no longer than 30 minutes.

## Measures

**Demographic information.** Participants were asked to report their age, gender, and nationality.

**Resource allocation task.** This task was used to measure costly moral behaviour and was adapted from the dictator game (DG). In the one-shot version of the DG (Kahneman et al., 1986), the proposer is given a sum of money that s/he can – but does not have to – share with an anonymous receiver whom s/he will never meet. The receiver cannot reject, reciprocate, or retaliate against the decision of the proposer. Thus, keeping the money and being selfish has no negative consequences for the proposer, and sharing has no (evident) gains. Proposers' positive offers or donated amount are regarded as an indication of their altruistic or moral preferences.

Using a within-subject design, participants made decisions as proposers in six DGs or resource allocation tasks. In five of the tasks, recipients were described as organizations or charities that represented one of the five moral foundations (Table 3.1). The aims and activities of each recipient organization were described on half a page. In the sixth (neutral) DG (baseline), no information about the receiver was given. The neutral DG was always presented first, and the remaining five DGs were presented in counterbalanced order. In each DG, proposers were asked to distribute £10 (UK)/50 Riyals (Saudi Arabia). From the six DG decisions, one was randomly chosen as payment for the participant. For example, if participants decided to give £4/20 Riyals to the recipient, they would keep £6/30 Riyals for themselves. The money that was given to the recipient was actually allocated a local charity in line with experimental economic practices (e.g. Hertwig & Ortmann, 2001).

Table 3.1. Foundations and the represented organizations or charities.

Foundation	Recipient organization
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Fairness/Reciprocity	An organization that offers free speaking hours with lawyers
Harm/Care	An organization supporting children
Ingroup/	A local organization that explicitly supports citizens of
Loyalty	the participants' own community
Authority/	An organization that aims at enforcing order and
Respect	authority
Purity/	An organization that aims at improving spiritual and
Sanctity	physical purity.

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**Moral Foundations Questionnaire (MFQ; Graham et al., 2008).** This 15 item questionnaire was used to measure participant's moral judgment. The questionnaire has five moral foundations, harm, fairness, ingroup, authority, and purity. In moral judgment, participants were asked to rate their moral agreement with each statement. Item included statements, such as "Compassion for those who are suffering is the most crucial virtue" (Harm/care foundation) would represent harm in moral judgment part. Each statement was answered on a six-point scale ranging from (1) strongly disagree to (6) strongly agree. The questionnaire was translated to Arabic by Bruneau (2010) and is available on the [moralfoundations.org](http://moralfoundations.org) website. Five scores were derived: Harm ( $\alpha=.47$ ), fairness ( $\alpha=.13$ ), ingroup ( $\alpha=.15$ ), authority ( $\alpha=.07$ ), and purity ( $\alpha=.62$ ).

**General values: Value Survey 14-Bipol-Value Questionnaire (Strack et al., 2008).** In this current study, we measured the Schwartz values with a shortened version of the original questionnaire. The 14-Bipol-value questionnaire was used in this study to determine the type of

values a participant endorses. The questionnaire was translated to Arabic by the researcher. Participants were presented with 14 pairs of opposing principles. In each pair, the choice of either two poles was elicited on a 5- point likert-type scale with a neutral/equal option, for example

*“Which of the two following principles is more important to you?”*

*Honesty*: very important – important – equal – important – very important: *success*

Following procedures outlined by Strack and Gennerich (2011), a confirmatory factor analysis (PCA) with orthogonal rotation (varimax) produced two factors which explained 37.66% of the item variance: (1) Openness to Change versus Conservation; and (2) Self-Transcendence versus Self-Enhancement. Factor scores were derived for each participant.

**Personal values: Good Self –Assessment Scale (Barriga et al., 2001).** This scale measures the centrality of moral traits to an individual’s self-understanding. It consists of 16 questions which ask the participant “How important is it to you that you are ...?” Eight questions contain a moral characteristic (e.g., honest), the other eight include a non-moral, but desirable characteristic (e.g., sociable). Participants rated each item on a scale from 1 (not important to me) to 5 (extremely important to me). The questionnaire was translated to Arabic by the researcher. Two scores were derived: personal moral values ( $\alpha=.72$ ), and personal non moral values ( $\alpha=.60$ ). A moral self-relevance score was derived by subtracting the non-moral values score from the moral values score. A positive moral self-relevance score indicates that moral values are more personally important to a person, a negative score indicates that non-moral values are more important to a person.

**Culture orientation scale (Individualism and collectivism scale).** The culture orientation scale by Triandis and Gelfland (1998) was used to determine participants’ level of individualism and collectivism. This 16-item questionnaire has four constructs, horizontal individualism, vertical

individualism, horizontal collectivism, and vertical collectivism. Each construct consisted of four statements. Items like “I’d rather depend on myself than others.” would represent horizontal individualism, and “Family members should stick together, no matter what sacrifices are required” represent vertical collectivism, for example. Participants were asked to select from nine response options ranging from (1) never to (9) always for each statement. The questionnaire was translated to Arabic by the researcher. Back translation procedure was applied to ensure the comparability of the Arabic questionnaire. Four scores were derived: horizontal collectivism ( $\alpha=.64$ ), vertical collectivism ( $\alpha=.65$ ), horizontal individualism ( $\alpha=.71$ ), and vertical individualism ( $\alpha=.65$ ).

## **Results**

### **Descriptive statistics**

The means and standard deviations of the study variables are shown in Table 3.2. A number of independent-samples t-tests were conducted to compare the main variables by culture (see Table 3.2). Concerning moral judgment, Saudi participants scored higher than UK participants on ingroup, authority, and purity, but there were no differences between the two samples in harm and fairness.

Regarding personal values, there were no differences between the two samples in personal moral values. However, Saudi participants scored higher than UK participants on personal non-moral values. UK participants scored higher than Saudi participants on moral self-relevance.

In terms of cultural orientation, participants from the UK scored higher in Horizontal Collectivism, than participants from Saudi Arabia. But participants from Saudi Arabia were higher in Vertical Individualism, Vertical collectivism, and Horizontal Individualism than participants from the UK.

Regarding general values, participants from the UK scored higher on openness to change and self-transcendence values, than participants from Saudi Arabia. But participants from Saudi Arabia scored higher in self-enhancement and conservation values, than participants from the UK.

Table 3.2. Means and standard deviations of the main variables by culture

	Saudi Arabia		United Kingdom		
	(N = 50)		(N = 52)		
Variables	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>t, p</i>
Moral Judgment					
Harm	3.48	.91	3.66	1.02	-.97, .333
Fairness	3.50	.61	3.37	.78	.87, .385
Ingroup	3.04	.76	2.80	.86	1.47, .143
Authority	3.65	.69	2.68	.81	6.45, .000
Purity	3.46	.81	2.17	.94	7.39, .000
Personal moral values	3.25	.39	3.21	.43	.51, .609
Personal non-moral values	3.08	.34	2.75	.42	4.21, .000
Moral self-relevance	.17	.38	.45	.54	-2.99, .003
Horizontal Individualism	7.27	1.58	6.40	1.13	3.20, .002
Vertical Individualism	5.39	1.48	4.35	1.62	3.34, .001
Horizontal Collectivism	5.93	1.45	6.09	1.34	-.58, .562

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Vertical Collectivism	6.97	1.43	5.85	1.14	4.35, .000
Tradition vs. openness	.54	.94	-.47	.76	5.98, .000
Self-transcendence vs. self-enhancement	.09	.97	-.15	.91	1.30, .195

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### **The effect of culture on resources allocations**

To be able to compare DG allocations across cultures, proportional scores were calculated by dividing the amount allocated to receiver by 10 (in the UK sample) or 50 (in the Saudi sample). A repeated-measures Analysis of Variance (ANOVA) with the within-subject variable receiver (neutral, harm, justice, ingroup, authority, purity) and the between-subject variable country (Saudi Arabia, UK) revealed the significant main effect of receiver,  $F(5, 99) = 79.05$ ,  $\eta^2 = .44$ ,  $p < .000$ , and the significant interaction effect of receiver x country,  $F(5, 99) = 3.24$ ,  $p = .010$ ,  $\eta^2 = .3$ . Post-hoc tests (with Bonferroni correction) indicated that participants allocated significantly less money in the neutral compared to all other conditions except the purity condition (all  $ps < .03$ ). Furthermore, participants allocated significantly more in the Harm than all other conditions (all  $ps < .03$ ). Allocations did not significantly differ in between the justice, ingroup, and authority conditions. Participants allocated more in the justice, ingroup and authority conditions than in the purity or neutral conditions (all  $ps < .04$ ), but less than in the harm condition (all  $ps < .03$ ; see Table 3.3 for means and SDs).

Table 3.3. Means and standard deviations of proportional allocation in the dictator game in neutral, harm, justice, ingroup, authority, and purity frames for Saudi Arabia, United Kingdom, and both samples

DG allocations	Saudi Arabia		United Kingdom		t, p
	M	SD	M	SD	
Neutral	.19	.21	.33	.20	3.50, .001
Harm	.79	.22	.76	.25	.78, .44
Justice	.45	.30	.51	.23	1.24, .22
Ingroup	.47	.29	.48	.22	.25, .81
Authority	.56	.32	.51	.29	.17, .51
Purity	.35	.27	.32	.25	.50, .61

The significant receiver x country interaction was followed up with two repeated-measures ANOVAs separately for each country. In Saudi Arabia sample, the ANOVA revealed significant main effects of receiver,  $F(5, 49) = 46.48$ ,  $p < .000$ . Post-hoc tests (with Bonferroni correction) indicated that Saudi participants allocated significantly less money in the neutral condition compared to all other conditions (all  $ps < .00$ ). Moreover, participants allocated significantly more money in the harm condition than all other conditions (all  $ps < .00$ ). Allocations did not significantly differ in between the justice, ingroup, authority, and purity conditions. Saudi participants allocated more money in the justice, ingroup and authority conditions than in the purity or neutral conditions (all  $ps < .00$ ), but less than in the harm condition (all  $ps < .00$ ). Saudi participants allocated more money in the justice, ingroup, and purity conditions than the neutral condition (all  $ps < .00$ ), but less than in the harm and authority conditions (all  $ps < .00$ ).



In United Kingdom sample, the ANOVA revealed significant main effects of receiver,  $F(5, 51) = 34.37$ ,  $p < .000$ . Post-hoc tests using the Bonferroni correction indicated that UK participants allocated significantly less money in the neutral condition compared to all other conditions except the purity condition (all  $ps < .00$ ). Furthermore, participants allocated significantly more in the Harm condition than all other conditions (all  $ps < .00$ ). Allocations did not significantly differ in between the justice, ingroup, and authority conditions. Participants allocated more money in the justice, ingroup and authority conditions than in the purity or neutral conditions (all  $ps < .00$ ), but less than in the harm condition (all  $ps < .00$ ).

As can be seen in Table 3.3, a series of independent-sample t-tests compared culture differences DG allocations in the neutral and the five moral foundation conditions. Participants in the UK allocated significantly more than participants in Saudi Arabia in the neutral condition. No other culture differences emerged in DG allocations for the five moral foundations.

### **Predicting Dictator Game Allocations**

For each DG per foundation multiple linear regression analyses were conducted to examine the relationship between DG and potential predictors such as nationality, gender, moral judgment, moral self-relevance, and general values. In Step 1, gender and nationality were entered into the model. In Step 2, moral judgment in the respective foundation, personal moral self-relevance, and the two general value variables were additionally entered.

**Harm foundation.** Nationality and gender did not predict DG allocations in the harm foundation,  $F(2, 99) = 1.10$ ,  $p = .33$ ,  $R^2 = .022$ . In Step 2, moral self-relevance significantly predicted DG allocations in the harm foundation and nationality and moral judgment marginally predicted DG allocations in the harm foundation,  $F(6, 95) = 1.94$ ,  $p = .08$ ,  $R^2 = .11$  (see Table 3.4). Participants higher in moral self-relevance allocated significantly more in the DG (harm foundations). Those

with higher moral judgment and participants from Saudi Arabia allocated marginally more in DG (harm).

Table 3.4. Results of Regression Analysis Predicting DG allocation in harm foundation

Independent variables	$\beta$	$\Delta R^2$ , p
Step 1		.022, .336
Nationality	-.122	
Gender	.133	
Step 2		.09, .06
Nationality	-.21†	
Gender	.06	
Moral judgment (harm)	.20†	
Moral self-relevance	.26*	
Values (tradition vs. openness)	-.08	
Values (self-transcendence vs. self-enhancement)	.16	

**Justice foundation.** None of the independent variables significantly predicted DG allocations in the justice foundation, neither in Step 1,  $F(2, 99) = 1.39$ ,  $p = .25$ ,  $R^2 = .03$ , nor Step 2,  $F(6, 95) = 1.07$ ,  $p = .39$ ,  $R^2 = .06$  (see Table 3.5).

**Ingroup foundation.** In Step 1 only gender significantly predicted DG allocations in the ingroup foundation,  $F(2, 99) = 2.01$ ,  $p = .14$ ,  $R^2 = .04$ . (see Table 3.6). Females tended to allocate more in DG in the ingroup foundation ( $M = .52$ ,  $SD = .25$ ) than males ( $M = .41$ ,  $SD = .27$ ) None of the independent variables significantly predicted DG allocation (ingroup) in Step 2,  $F(6, 95) = 1.33$ ,  $p = .25$ ,  $R^2 = .08$ .

Table 3.5. Results of Regression Analysis Predicting DG allocation in justice foundation

Independent variables	$\beta$	$\Delta R^2$ , p
Step 1		.03, .25
Nationality	.08	
Gender	.12	
Step 2		.04, .47
Nationality	.05	
Gender	.09	
Moral judgment (justice)	-.01	
Moral self-relevance	.00	
Values (tradition vs. openness)	-.04	
Values (self-transcendence vs. self-enhancement)	-.19	

Table 3.6. Results of Regression Analysis Predicting DG allocation in ingroup foundation

Independent variables	$\beta$	$\Delta R^2$ , p
Step 1		.04, .14
Nationality	-.05	
Gender	.21*	
Step 2		.04, .42
Nationality	-.09	
Gender	.18	
Moral judgment (harm)	.01	

Moral self-relevance	.06
Values (tradition vs. openness)	-.03
Values (self-transcendence vs. self-enhancement)	-.17

**Authority foundation.** In Step 1, gender significantly predicted DG allocation in the authority foundation,  $F(2, 99) = 2.23, p = .09, R^2 = .05$ . In Step 2, gender and moral judgment in the authority foundation marginally predicted DG allocations (authority),  $F(6, 95) = 2.85, p = .01, R^2 = .15$  (see Table 3.7). Females allocated more in DG authority than males ( $M = .59, SD = .30$  vs.  $M = .47, SD = .32$ ). Those with a higher moral judgment in the authority foundation tended to allocate more in DG.

**Purity foundation.** None of the independent variables significantly predicted DG allocations in the purity foundation, neither in Step 1,  $F(2, 99) = .17, p = .85, R^2 = .00$ , nor Step 2,  $F(6, 95) = .81, p = .57, R^2 = .05$  (see Table 3.8).

Table 3.7. Results of Regression Analysis Predicting DG allocation in authority foundation

Independent variables	$\beta$	$\Delta R^2, p$
Step 1		.05, .09
Nationality	-.14	
Gender	.22*	
Step 2		11, .02
Nationality	.03	
Gender	.17†	
Moral judgment (harm)	.22†	

Moral self-relevance	.12
Values (tradition vs. openness)	.17
Values (self-transcendence vs. self-enhancement)	-.13

Table 3.8. Results of Regression Analysis Predicting DG allocation in purity foundation

Independent variables	$\beta$	$\Delta R^2, p$
Step 1		.00, .85
Nationality	-.06	
Gender	.03	
Step 2		.05, .35
Nationality	-.10	
Gender	.01	
Moral judgment (harm)	.02	
Moral self-relevance	-.04	
Values (tradition vs. openness)	-.08	
Values (self-transcendence vs. self-enhancement)	-.22	

**Allocations in neutral DG.** Step 1 included the independent variables Nationality and Gender. Nationality significantly predicted allocations in the neutral DG,  $F(2, 99) = 6.53, p = .002, R^2 = .12$ , with participants from the UK allocating significantly more than those from Saudi Arabia. Step 2 additionally contained the variables moral self-relevance, and the two value dimensions. Nationality and moral self-relevance significantly predicted allocations in the neutral DG,  $F(5,$

99) = .4.65,  $p = .001$ ,  $R^2 = .20$  (see Table 3.9). UK participants and those with higher moral self-relevance allocated significantly more in the neutral DG.

Table 3.9. Results of Regression Analysis Predicting DG allocation in a neutral situation

Independent variables	$\beta$	$\Delta R^2$ , $p$
Step 1		.12, .002
Nationality	.30**	
Gender	.09	
Step 2		.08, .03
Nationality	.27*	
Gender	.04	
Moral self-importance	.23*	
Values (tradition vs. openness)	.06	
Values (self-transcendence vs. self-enhancement)	-.09	

### **Moderated mediation of DG allocations**

As discussed in the Introduction, theories on the influence of the moral self-assume that moral judgments assert their influence through the importance of moral values for the self (i.e., moral self-importance). We therefore tested whether moral self-importance mediated the relationship between moral judgment and DG allocations. Furthermore, given the cultural differences we found in participants' moral judgments and moral self-importance, Nationality was entered as a moderating, moderating the relationship between moral judgment and DG

allocations and moral self-importance and DG allocations. An overview of the conceptual model for this analysis is shown in Figure 3.1. A moderated-mediation analysis was run in PROCESS (Hayes, 2013) using a bias-corrected bootstrap approach (1000 bootstraps) to calculate 95% confidence intervals (CI). If the 95% CI limits do not include zero, the effect is interpreted as being significantly different from zero.

Results showed that the effect of the mediator, moral self-importance, on DG allocations was positive and statistically significant ( $B = .11$ ,  $SE = .05$ ,  $p = .03$ , 95%CI [.01, .21]). Furthermore, the effect of moral judgment on DG allocations was moderated by nationality ( $B = .07$ ,  $SE = .03$ ,  $p = .02$ , 95%CI [.01, .13]): While among the Saudi sample moral judgment did not predict DG allocations ( $B = .02$ ,  $SE = .02$ ,  $p = .49$ , 95%CI [-.03, .06]), among the British sample, moral judgment positively significantly predicted DG allocations ( $B = .09$ ,  $SE = .02$ ,  $p < .01$ , 95%CI [.05, .12]). However, the effect of the mediator, moral self-importance, was not moderated by nationality ( $B = -.05$ ,  $SE = .06$ ,  $p = .37$ , 95%CI [-.17, .06]).

We additionally conducted a similar moderated mediation analysis with the mediator “Openness to Change versus Conservation” values. Results indicated only a marginally significant effect of the moderator, nationality, on the relationship between moral judgment and DG allocations ( $B = .06$ ,  $SE = .03$ ,  $p = .06$ , 95%CI [-.002, .12]). Among the British sample, there was a significant positive effect of moral judgment on DG allocations ( $B = .09$ ,  $SE = .02$ ,  $p < .01$ , 95%CI [.05, .12]), but this relationship did not reach statistical significance among the Saudi sample ( $B = .03$ ,  $SE = .02$ ,  $p = .21$ , 95%CI [-.02, .08]). “Openness to Change versus Conservation” values did not mediate the relationship between moral judgment and DG allocations.

When conducting a moderated mediation with the “Self-Transcendence versus Self-Enhancement” values as mediator and Nationality as moderator, results revealed that the effect

of the mediator, Self-Transcendence versus Self-Enhancement” values, on DG allocations was negative and statistically significant ( $B = -.05$ ,  $SE = .02$ ,  $p = .01$ , 95%CI  $[-.09, -.01]$ ). Thus, scoring higher on self-transcendence values mediated the effect of moral judgment on DG allocations. Furthermore, the effect of moral judgment on DG allocations was moderated by nationality ( $B = .08$ ,  $SE = .03$ ,  $p = .01$ , 95%CI  $[.02, .13]$ ): While among the Saudi sample moral judgment did not predict DG allocations ( $B = .01$ ,  $SE = .02$ ,  $p = .65$ , 95%CI  $[-.03, .06]$ ), among the British sample, moral judgment positively significantly predicted DG allocations ( $B = .09$ ,  $SE = .02$ ,  $p < .01$ , 95%CI  $[.06, .13]$ ).

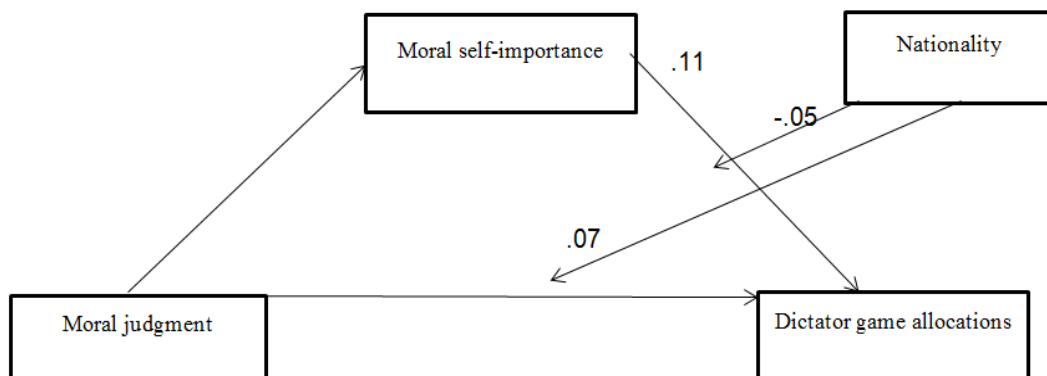


Figure 3.1 Moderated mediation of DG allocations

## Discussion

Study 2 had three main goals: first, to assess whether the culture differences found for people’s moral judgments in the five moral foundations could also be found for their actual moral behaviour; second, whether foundation-specific moral judgment predicted foundation-specific



actual moral behaviour; third whether participants' general values and moral self-importance mediated the relationship between moral judgment and moral behaviour (DG allocations) in the five moral foundations.

### **Cross-cultural differences in moral behaviour**

This study drew on the dictator game, a task developed in experimental economics, to assess actual foundation-specific moral behaviour. Participants were asked to allocate real money between themselves and either an anonymous receiver or five different charities. These charities were modelled on the basis of the five moral foundations. First, in line with previous research (e.g., Eckel & Grossman, 1998), framing the dictator game in a charity context increased allocations to the receiver significantly compared to a neutral receiver for whom no additional information was available in both cultures. Second, we found that participants donated more (or less) to depending on the framing of the receiving charity.

Participants allocated significantly more in the Harm than all other conditions. Furthermore, participants allocated significantly less money in the neutral compared to all other conditions except the purity condition. Allocations did not significantly differ in between the justice, ingroup, and authority conditions. Furthermore, few cultural differences in allocations to the charities framed according to the different moral foundations emerged. These results are in contrast to the results found for moral judgments and moral endorsements in Study 1 and in the current study. For moral judgments results are in line with Graham and colleagues (2011) who showed that participants in western cultures such as United Kingdom and Canada gave little importance to purity and ingroup foundations while participants from Asia and the Middle East valued and endorsed ingroup, authority and purity more than western participants. The finding that the donation behaviour did not follow this cross-cultural pattern is interesting and

unexpected. The descriptions used to frame the different charities according to the moral foundations were modelled on actual charities operating in the UK, and it could be that the mission statements of these fictional charities were not as common and effective in a Middle Eastern context. Furthermore, inspection of the mean proportion of amounts donated indicates that for most of the charities, namely the Justice, Ingroup, and Authority charity, participants donated about half of the amount. Only for the Harm foundation did participants donate significantly more, almost two thirds of their allocated money, and they donated significantly less than half (about one-third of the original amount) to the purity charity. As Messick (1993); Keller et al., (2013) equality or giving exactly half is the default heuristic for allocators in the dictator game, and dictators use additional information or cues to adjust the allocation from this anchor. It seems to be the case that a charity that supported families and children with a life-threatening disease was particularly successful in increasing DG allocation away from the equality anchor whereas a charity that supported young people's meaningful relationship decreased allocations away from the equality anchor.

### **Moral judgment and moral behaviour**

There is still controversy as to whether people's moral judgments predict their moral behaviour. Teo and Chan-Serafin (2013) explored the connection between unethical pro-organizational actions and the five moral foundations and found that unethical leadership might negatively impact people who value binding foundations (e.g., they have respect for authority) more than those who value individualising foundations. Furthermore, some studies have found significant associations between foundation-specific moral judgment and behaviour, especially prosocial allocations and charitable giving. For example, Schier et al. (2016) showed that moral judgment in the fairness foundation was significantly related to (neutral) dictator game allocations. As the

dictator game is often regarded as a measure of people's fairness preferences (Schier et al., 2016; Camerer, 2003), this seems to indicate a relationship between foundation-specific moral judgment and behaviour. Nilsson et al. (2016) showed that charitable giving was related to moral judgment in the harm and fairness foundations, whereas charitable giving to one's ingroup was associated with moral judgment in the ingroup, authority, and purity foundations.

In our study, moral judgment predicted participant's moral behaviour in harm and authority foundations only. This result is supported by Nilsson et al. (2016). Furthermore, Kohlberg and Candee (1984) assumed that a moral action is motivated by a moral reasoning and thus that higher level moral reasoning is correlated with more moral behaviour. However, foundation-specific moral judgment did not predict DG allocations in the justice, ingroup and purity foundations. This result is supported by Gummerum et al. (2008) and Takezawa et al. (2006) studies that showed that children's, adolescents', and adults' costly sharing of resources was not predicted by the level of moral judgment. Thus, like previous research, Study 2 only found mixed results for the relationship between foundation-specific moral judgment and behaviour. We therefore assessed the influence of another variable, moral identity, on moral behaviour.

### **The mediating role of moral identity**

While we found some (marginal) associations between foundation-specific moral judgment and foundation-specific moral behaviour, this relationship was not as clear-cut as some moral theories would predict (Teo & Chan-Serafin, 2013; Schier et al., 2016; Nilsson et al., 2016). We additionally investigated the role of general and personal moral values (moral identity) as direct and indirect predictors of moral behaviour.

To our knowledge, this is the first time that the concept of moral identity has been investigated within the framework of moral foundation theory. In line with other research on moral identity and the moral self (Kohlberg, 1969; Blasi, 2005), we suggest that moral judgments derive their power and influence moral behaviour by being personalized and by being part of a person's identity. That is, judging whether something is morally right or wrong is not enough to influence a person's behaviour, but morality must be personally self-relevant to a person. In these instances, a person tried to behave consistently with their self-relevant personal values. Given that moral self-relevance and some of the moral judgments differed between the British and Saudi participants, we additionally added nationality as a moderator which was expected to moderate the relationship between moral self-importance and moral behaviour (DG allocations) and moral judgment and moral behaviour.

In line with theories of the moral self and moral identity (Blasi, 2005; Aquino & Reed, 2002; Hardy, 2006), we found that personal moral values/ moral self-importance mediated the relationship between moral judgment and moral behaviour. Thus, while moral judgments did not directly predict moral behaviour, moral self-importance mediated the relationship between judgment and behaviour. These results are consistent with previous studies by Reed (2002) and Prat et al. (2003) which assume that there is a relationship between moral self-importance and moral and prosocial behaviour. In addition, according to Aquino and Reed (2002) and Hardy (2006) moral identity is linked to moral behaviour such as money donations to charity. Thus, judging an action as morally right or wrong is not enough to transform this evaluation into costly moral behaviour; a moral judgment needs to be important for a person's moral identity to affect moral behaviour (see Bergman, 2002).

The results showed that this mediation effect was not moderated by nationality. Hence, the effect of personal moral values on moral behaviour was similar for British and Saudi participants. On the other hand, the effect of moral judgment on moral behaviour was moderated by nationality. Among the British sample, moral judgment positively significantly predicted DG allocations while the Saudi sample moral judgment did not predict DG allocations. Given the sparse cross-cultural research particularly on moral identity and behaviour, these findings indicate cross-cultural similarities and differences in processes underlying costly moral behaviour. While evaluating some actions as right or wrong might be predictive of moral behaviour only in western societies, a personal commitment to moral norms and values seems to be similarly predictive of moral behaviour in cultures as different as the UK and Saudi Arabia. Clearly, these results need to be replicated in future research encompassing a range of different cultures and moral behaviours.

Cross-cultural research on moral identity is rare. We found that UK participants were higher than Saudi participants on moral identity. These results were in contrast to the study by Jia (2016) who assumed that there are differences in moral identity between Canadian and Chinese participants. Chinese participants gave high importance to moral identity in the context of school and the context of community, more than Canadian participants. In conclusion, individuals seem to differ across cultures in their definition of moral identity. To our best knowledge no study has compared moral identity between western and Middle Eastern participants.

Our previous study found that general values predicted moral judgment. In this study we focused on investigating whether participants' general values would mediate the relationship between moral judgment and moral behaviour in the five moral foundations. We measured general values by employing the shortened version of the original questionnaire of Schwartz values. Schwartz

values model (1992) is one of the most researched models in cross-cultural researches. With a large representative sample from fifty-four societies, ten value types were emerged (Berry, et al., 2002). These ten values can be organized on two dimensions: the self-enhancement versus self-transcendence dimension and openness-to-change versus conservation dimension. The first dimension contrasts values emphasizing acceptance of others as equals and concern for their welfare with values emphasizing the pursuit of one's own relative success and dominance over others. The second dimension contrasts values emphasizing own independent thoughts and behaviour and favouring change with values emphasizing submissive self-restriction. However, far too little attention has been paid to the relationship between general values and morality. Considering the small number of morality and general values studies and our previous results, the goal of this study was to investigate the relationship between general values and moral judgment and behaviour.

Results showed that the "openness to change versus conservation" values were not related to moral behaviour, neither directly nor indirectly. However, the "self-transcendence versus self-enhancement" values mediated the relationship between moral judgment and DG allocations. That is, while moral judgment did not directly predict moral behaviour, it did predict moral behaviour in those participants who scored highly on self-transcendence. High scores on self-transcendence values mean that endorsement of values such as social justice, equality, and helpfulness would be high (Schwartz, 2012). All these values are related to moral behaviour and it is plausible that they have an effect on the relationship between moral judgment and moral behaviour.

## **Limitations and conclusions**

This study attempted to make several improvements in the field of moral psychology. First, explanations regarding the moral judgment predictions of people's actual moral behaviour were provided. Our findings show that moral judgment predicts DG allocations in harm and authority foundations only. However, the results showed that moral judgment did not predict DG allocations in the justice, ingroup, and purity foundations. These results explain that moral foundations theory might help to indicate when, why, and how people donate money to charity (Nilsson et al., 2016). It is important to note that the majority of studies on individual differences in charitable giving are based on survey measures of moral behaviour (Paulhus, 1984) while this study is based on self-reported measures and actual donations to minimize social desirability biases.

Second, this study has been important in providing explanation regarding the relationship between moral identity, general values, moral judgment, and moral behaviour. Higher moral self-importance mediated the relationship between moral judgment and allocations in the dictator game in both samples. In addition, among British sample, moral judgment positively predicted DG allocations. Furthermore, self-transcendence versus self-enhancement values mediated the relationship between moral judgment and DG allocations. High scores on self-transcendence values mediated the relationship between moral judgment and DG allocations. Investigating the relationship between moral identity, general values, moral judgment, and moral behaviour enhanced our knowledge of moral domain.

Third, this study provided support for the absence of cross-cultural differences in moral behaviour and the existence of cross-cultural differences in moral self-importance. No cross-cultural differences were found between the two samples concerning moral judgment in the care and justice foundations. Furthermore, no cultural differences were found between the two

samples concerning moral behaviour in the five foundations. In addition, UK participants scored higher in moral self-importance.

There are several issues that limit the interpretation of the current findings. Many of these limitations concern the sample size and type and measures used in this study. First, the data were not from representative samples as participants in the present study were university students in both samples. As discussed above, this might have particularly influenced our measures of moral judgment, moral identity, general values, and moral behaviour.

Second, some of the measures employed in this study were designed in western cultures and applied in western and non-western cultures for the lack of measures designed for non-western populations. While some of the measures (particularly the values and moral judgment measures) have been developed for or used in previous research with Middle Eastern samples (Schwartz, 1992, 2006; Knafo et al., 2008; Saucier et al., 2015), particularly the moral identity measures were not. As discussed above, a replication of this study's finding, especially concerning the effect of moral identity on moral behaviour is therefore warranted.

Third, the framing of the charity organizations in justice, ingroup, and purity in the DG task might affected the amount of donations was giving by the participants. In general, while the presented study successfully operationalized costly moral behaviour in two culturally diverse samples, other measures of moral behaviour should be used in future research to replicate and substantiate the current findings. This will help in understanding the cross-cultural similarities and differences in moral behaviour and its underlying processes.



## **Chapter 4:**

### **Study 3: Moral foundations and moral behaviour. A Cross-cultural comparison.**

#### **Introduction**

Various factors can influence moral behaviour as discussed in previous chapters, including moral reasoning (Kohlberg, 1969), emotions (Eisenberg, 1986; Hoffman, 2000), cognitive abilities (e.g., perspective-taking, ego strength; Rest, 1984), and moral identity (Blasi, 2005). Moral identity and personal moral values were investigated in the study summarized in Chapter 3. The results of our previous study revealed that moral identity mediated the relationship between moral judgment and allocations in the dictator game in both samples. Moral identity or the strength of personal moral values is defined as the ideas an individual holds about his or her moral character (Aquino et al., 2009). Aquino and Reed (2002) defined moral identity as a self-perception organized around a group of moral values. Chapter 3's findings are in line with Blasi's (1983, 1984, 2005) model of moral identity. This model firstly assumes that, in addition to moral judgment, people's moral behaviour is based on making a judgment of responsibility. This means that they have to evaluate their responsibility for acting on their judgment (Blasi, 1984). Second, the standards for making moral judgments come from an individual's moral identity, which explains individual differences in the degree of moral centrality and behaviour (Blasi, 1995). Thirdly, people have an inclination to pursue self-consistency. For example, an individual high in moral identity is supposed to feel obligated to act in a style that is consistent with his or her moral self-construal (Blasi, 1984).

The findings from Chapter 3 indicate that moral identity (or moral self-relevance) mediates the relationship between moral judgment and moral behaviour, as suggested by Blasi, at least for prosocial moral behaviours, such as giving money to charity. But what about other moral behaviours? Moral philosophers, like Immanuel Kant (1785), differentiated between perfect (or negative) and imperfect (or positive) moral duties or behaviours. Perfect duties (e.g., “though shalt not steal”) allow no exceptions but must be kept towards everybody. Imperfect duties, such as helping, sharing, or giving, allow some exceptions, as we cannot fulfil imperfect duties all the time, towards everybody. Thus, imperfect duties give a moral agent some choice as to whether to fulfil them or not. While Study 2 (Chapter 3) indicates that moral identity has a role to play for accomplishing an imperfect duty (i.e., giving to charity), the study reported here will investigate the relationship between moral judgment, moral identity, and values for a perfect duty, namely honesty. Furthermore, Study 3 will assess cross-cultural differences in the relationships between these variables.

### **Assessing (dis-)honesty**

Empirical research has assessed honesty in a number of ways. In the current study, I will use experimental methods developed in experimental economics and psychology to assess (dis)honest behaviour. According to Gerlach (2017), the four most frequently used experimental paradigms to assess dishonest behaviours are sender-receiver games (e.g. Gneezy, 2005), coin-flip tasks (e.g., Bucciol & Piovesan, 2011), die-roll tasks (e.g., Fischbacher & Heusi, 2008), and matrix games (e.g., Mazar, Amir, & Ariely, 2008). In this study, I employed a task that is very similar to matrix game to measure honest behaviour. Matrix games have the advantage that dishonest behaviour can be measured at the individual level and that degrees of dishonest

behaviour can be assessed (rather than just knowing whether a participant cheated or not; see Abeler et al., 2016; Gerlach, 2017, for reviews).

Mazar et al. (2008) conducted one of the first studies that assessed honest behaviour through matrix tasks. In their study, one group was asked to write down the names of 10 books they had read in high school (no moral reminder), the second group was asked to write down the Ten Commandments (moral reminder). In the second task, each student was handed two sheets of paper: a test sheet and an answer sheet. The test sheet consisted of 20 matrices, each based on a set of 12 three-digit numbers. Participants had four minutes to find two numbers per matrix that added up to 10. In the two control conditions (after the 10 books and Ten Commandments recall task), at the end of the four minutes participants handed both sheets to the experimenter to check their answers and wrote down the number of correctly solved matrices on the answer sheet. In the two recycle conditions (after the 10 books and Ten Commandments recall task), participants indicated the number of correctly solved matrices on the answer sheet, folded the original test sheet, and placed it in their belongings (to recycle it later), to give them the chance to cheat. After putting the test sheet away they handed the answer sheet to the experimenter. At the end of the session, \$10 was given randomly to two participants who correctly solved the matrices. The results confirmed that the type of reminder did not influence participants' (dis)honest behaviour in the two control condition. In the book recall (no moral reminder) condition, respondents cheated when they had the chance to do, but participants in the moral reminder condition cheated significantly less. Reminding participants of moral values discarded cheating completely in the Ten Commandments/recycle condition.

Gino, Norton, and Ariely (2010) examined the dishonest behaviour employing matrix experiments. The experiment included five tasks to examine whether wearing fake sunglasses would increase dishonest behaviours as compared with wearing brand-name sunglasses. First,

participants were told that they would evaluate the quality of different pairs of sunglasses as part of a marketing study and were asked to choose between two options of different products. Participants in the counterfeit-sunglasses condition were asked to take a pair of sunglasses from the box labelled “Counterfeit Sunglasses” and participants in the authentic-sunglasses condition were asked to take a pair of sunglasses from the box labelled “authentic-sunglasses”. Participants engaged in a number of tasks measuring dishonest behaviour. Among others, matrix games were used. Participants were asked to complete work sheets with 20 matrices and collection slip adapted from Mazar et al. (2008) while wearing their sunglasses. Participants had 5 min to find two numbers in each matrix that added up to 10; the time allocated was not enough for anyone to solve all 20 matrices. For each pair of numbers solved correctly, participants received \$0.50 (for a maximum payment of \$10). After 5 min, participants folded their work sheet and placed it in a recycling box and then wrote down the number of “correctly” solved matrices on their collection slip. There was no identifier on the work sheet. Participants who wore fake sunglasses cheated more in the matrix task than did participants who wore authentic sunglasses.

Gino et al. (2013) examined the influence of beneficiaries on dishonest behaviour. Cheating behaviour was measured using matrix tasks. Each participant had 5 min to find two numbers per matrix that added up to 10 and write down the number of matrices they solved correctly on a separate collection slip. Gino et al. (2013) assumed that cheating would increase when individual can benefit others from their cheating and when the number of beneficiaries of transgression increases. The results showed that individual justify their selfish behaviours through the use of moral flexibility when their behaviours benefit others and themselves. For example, if individuals’ dishonest behaviour benefitted others, they saw their dishonest behaviour as morally acceptable behaviour.

Grolleau et al. (2016) used matrix games adapted from Mazar et al. (2008) to investigate whether unmonitored performance would be associated with more dishonest behaviour than actual monitored performance. They used a two by two design: gain versus loss frame and monitored performance versus self-reported performance. In the gain frame, participants were given the payment after they solved the matrix task but in the loss frame, participants were given the maximum amount at the beginning of the task in cash and they would lose or keep the money based on their performance on the task. The results showed that self-reported performance in the unmonitored condition was significantly higher than actual performance in the monitored condition which indicates the presence of cheating. However, cheating increased in the loss frame than in the gain frame under no monitoring condition indicating that the fear of losing increased dishonest behaviour.

Overall, these studies indicate that the studied factors influence people's behaviour in matrix games in non-trivial ways: People engage in more dishonest behaviour when they receive subtle cues that cheating is okay (i.e., when wearing fake sunglasses; Gino et al., 2010), but are more honest when they get subtle moral cues (i.e., the Ten Commandments; Mazar et al., 2008). Dishonest behaviour increases when performance is not monitored (Grolleau et al., 2016), and people use "moral" reasons to justify dishonesty (Gino et al., 2013). These studies thus indicate that matrix-style games are well-suited to assess adults' dishonest behaviour.

### **(Dis-)Honesty and morality**

Honesty is one of the characteristics individuals usually use to describe a moral person (Aquino & Reed, 2002). It is thus reasonable to assume that cheating behaviour or dishonesty makes an individual less moral (Aquino et al., 2009). West et al. (2004) hypothesized that the relationship between moral judgment and cheating behaviour should be negative and, on the

flipside, self-reported honest behaviour would be positively related to moral judgment. However, these hypotheses were not supported by the data. The relationship between moral judgment scores and (dis-)honest behaviour was not significant.

According to Bersoff (1999), very little work has examined the direct cognitive precursors to unethical behaviour especially among non-delinquent populations. Bersoff (1999) conducted experiments in which student participants were “accidentally” overpaid for their participation in a study. The goal of this experiment was to test whether participants would point out the overpayment in six different conditions. In Condition 1, participants were led to believe that the study was sponsored by a fictitious European electronics company (baseline). Condition two; same procedure as the baseline condition but with different distraction task. For example, participants were presented with a story about a woman working for a computer company and took a small amount of money from office supplies home for her own use. Participants were then asked to evaluate five rationalizations individually that the woman could use to justify her behaviour. In Condition 3, participants were led to believe that the study was part of the experimenter’s dissertation research. In Condition 4, a confederate counted out the money and asked “is that right?”. Condition 5, combined Conditions 3 and 4; and Condition 6 combined the Condition 2 and 4. The results showed that experiment manipulations affected the number of unethical behaviour. Significant increase in pointing out the overpayment associated with increase in the number of manipulations indicating that the baseline condition has the least number of participants who returned the overpayment. This manipulation effect was not mediated by any other variables investigated in this study such as gender and self-reported temptations. This study suggests that in situations that involve small act of social violation individuals usually deviate the moral consequences of their wanted behavioural reaction and behave in opposite way to these motivations.

Previous studies (Grimm, Kohlberg, & White, 1968; Malinowski & Smith, 1985) showed that the higher the moral reasoning of an individual the lower the occurrence of cheating. In Malinowski & Smith (1985) study, participants were implicitly promoted to magnify about their performance during the task by showing them false and unfavourable comparisons to other participants' scores. The experimenter was absent during the experiment to give participants the opportunity to record the task completion time and the score they earned during the task. Cheating behaviour in these studies was tested based on cheating on experimental tasks, not on actual or natural tasks (Newstead et al., 1996). Bay and Greenberg (2001) examined the relationship between moral judgment and deceptions behaviour. They asked students to volunteer in a trading experiment with conditions that allowed students to dissemble about the quality of their products, and with economic incentives that rewarded any dissembling. Interestingly, they found different behaviour across genders. For female participants, deceptive behaviour increased when moral judgment scores increased. For male participants, moderate scores of moral judgment related to low rate of deception behaviour while higher and lower scores of moral judgment related to higher rate of deception behaviour. This indicates that other (demographic) variables can affect the relationship between moral judgment and (dis-)honest behaviour. Along these lines Triandis (1995) suggested that being honest when dealing with strangers is more appreciated in individualist countries, while having good relationships is more important in collectivist countries. Thus, cultural orientation might affect people's (dis-)honest behaviour, but this question has not been investigated experimentally yet.

Theoretically, moral identity should be positively related to positive moral behaviour, such as helping, sharing, and giving, and negatively related to immoral behaviour such as lying, cheating, and stealing (Shao et al., 2008). According to West et al. (2001), the number of studies investigating the relationship between (dis-)honest and moral identity is very small. Sage et al.

(2006) examined the effect of goal orientations and moral identity on football player's behaviours. Findings showed a negative link between moral identity and antisocial behaviours, such as hurting other team players.

### **The present study**

The goal of Study 3 was to investigate the relationship between (dis-) honest behaviour, moral judgment (measured through MFT) and moral identity. While honesty can be regarded as a quintessential perfect duty, not many studies have investigated the relationship between (dis-)honesty and moral variables. Based on the existing scarce research, we predict that particularly moral judgment in the fairness domain should be positively related to honesty (Hypothesis 1). Furthermore, the study by Bersoff (1999) indicates that in experimental conditions where the negative outcomes of dishonest behaviour for an actual person (i.e., Condition 3) were emphasized, participants cheated less. Thus, moral judgment in the harm foundation might be positively related to honesty (Hypothesis 2). Studies on the relationship between moral identity and immoral behaviour are rare. Following the results of Study 2 and based on theoretical assumptions of moral identity theory (e.g., Blasi, 2005), I explored whether moral identity would mediate the relationship between moral judgment in the five moral foundations and dishonesty (Hypothesis 3).

I know of no study that assessed cheating in Saudi Arabia nor, indeed, investigated the role of moral variables. However, if Triandis's (1995) suggestion is correct, then participants from the UK should cheat less in the experimental task used in this study (i.e., an interaction between strangers) than Saudi participants (Hypothesis 4). Furthermore, it is possible that moral judgments in the different foundations affect honest behaviour differently in Saudi Arabia and the UK. Since honesty is particularly important to keep good and close relationships in



collectivistic countries (see Triandis, 1995), moral judgment in the binding foundations ingroup, authority, and purity might be more predictive for honest behaviour among Saudi than UK participants (Hypothesis 5).

## **Method**

### **Participants**

The study comprised 101 participants, all aged 18 years or older. The Saudi sample consisted of 53 participants ( $M_{Age} = 23$  years,  $SD = 2.82$ , 12 females, 41 males) and were marginally older than the British sample who consisted of 48 participants ( $M_{Age} = 21$  years,  $SD = 6.68$ , 37 females, 11 males),  $t(99) = 1.89$ ,  $p = .061$ . Furthermore, the distribution of males and females significantly differed in the two samples,  $X^2(2) = 30.92$ ,  $p < .000$ . The number of participants in this experiment is relatively low compared to the first study. This study was conducted in the lab using surveys to measure moral judgment, identity, and general values and using behavioural test to measure honesty unlike the first study where participants had to fill in the surveys online.

### **Procedure**

In the UK, participants were recruited through the University's participant pool which mainly contains students. In Saudi Arabia, participants were recruited by approaching students on campus. Those who agreed to participate were then invited to the lab.

Participants were presented with a brief of the study and were informed about the anonymity of their data as well as their right to withdraw, after which they had to sign the consent form to participate. The experiment started with the honesty task, then participants were presented with a filler item, before being engaged with another version of the honesty task.

Afterwards, participants were asked to fill in some demographic information and four questionnaires (Moral judgment, general values, personalized values, and value survey module) in counterbalanced order. At the end, participants were presented with a debrief and were paid a show-up fee as well as the money they gained in the honesty task. The whole study took no longer than 45 minutes.

## Measures

**Demographic information.** Participants were asked to report their age, gender, and nationality.

**Behavioural test of honesty (Ganis, 2017).** In this task, participants are presented with 8 (in the first honesty task) or 6 (in the second honesty task) simple graphs. Their task was to try and reproduce these graphs without lifting their pen or retracing the same lines. Four (first task) or three (second task) of these graphs could be reproduced/drawn without lifting the pen (“doable graphs”); four/three graphs could not be drawn without lifting the pen (“non-doable graphs”). Figure 4.1 gives an example of a doable and non-doable graph.

For the first honesty task, participants were presented with four doable and four non-doable graphs and were given a time limit of 5 minutes to reproduce as many graphs as possible without lifting the pen on a piece of paper. After the 5 minutes, participants were asked how many graphs they managed to reproduce without lifting their pen. For every graph participants reported to reproduce without lifting the pen, they were paid £0.50 or SR 4. For example, if a participant reported to have reproduced three graphs, s/he was paid £1.50 (in addition to the show-up fee). Because only four graphs in the first honesty task were doable, if participants indicated to be able to reproduce five or more graphs without lifting the pen, this was taken as an indication of dishonesty.

In the second honesty task (presented after a filler task) participants were presented with six graphs, three doable, three non-doable. They were again given 4 minutes to reproduce the graphs and were told that they would be paid £0.50 per reproduced graph. If participants indicated that they were able to reproduce 4 or more graphs, this was regarded as an indication of dishonesty.

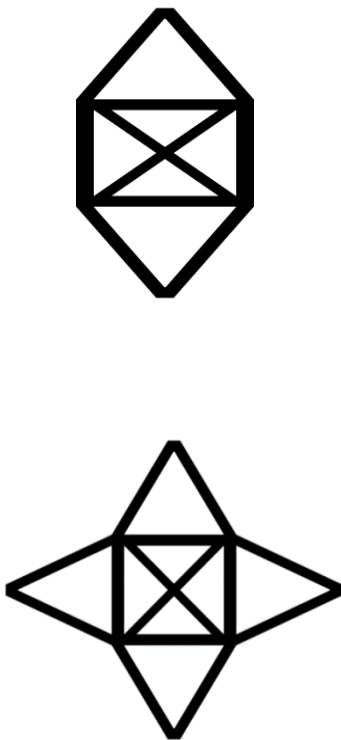


Figure 4.1: Examples of a doable (top) and non-doable (bottom) graph

This study uses a minor form of deception in the honesty task. In the instruction of the honesty task, participants were told that some of the figures can be drawn more easily than others, and that some might be not doable. However, participants are not told how many of the figures were doable or not, and that claiming that they could draw more than four figures is an indication (but not a certainty) of dishonesty. We believe that this sort of deception is necessary here: Because of social desirability, it is very difficult, if not impossible, to study (dis-)honesty without a

minimum of deception. It should be noted that participants were explicitly debriefed about the number of doable and undoable figures in the debrief.

**Filler task: Alternative Uses Test of Creativity (version developed by Mohamed, 2014).** In this test, participants were given words of common objects (e.g., shoe, button, key, tire, barrel, pencil), and they had to develop novel uses for these objects. The test was timed (maximum time 10 mins), and participants' solutions were coded for originality, fluency, flexibility, and elaboration, in line with the criteria developed by Mohamed (2014). Because this task was only used as a filler between the two honesty tasks, results are not analysed here.

**Moral judgment: Moral Foundations Sacredness Scale (MFSS) (Graham & Haidt, 2012).** MFSS was used to determine participants' willingness to violate moral norms in exchange for money. This 20-item questionnaire measures respondents' willingness to engage in taboo trade-offs such as kicking a dog in the head (care) or renouncing ones' citizenship (loyalty) for money. These violations (situations) focus on judgment of third-party moral violations. For example,

“Curse your parents, to their face. (You can apologize and explain one year later)”

Participants indicate how much money they would have to pay you, to be willing to do each thing. On a scale of 8 points \$0 (doing it for free), \$10, \$100, \$1000, \$10000, \$100000, a million dollars, and never for any amount of money.

Five scores were derived: Harm ( $\alpha=.68$ ), fairness ( $\alpha=.43$ ), ingroup ( $\alpha=.57$ ), authority ( $\alpha=.68$ ), and purity ( $\alpha=0.43$ ).

**General values: Value Survey 14-Bipol-Value Questionnaire (Strack et al., 2008).**

This questionnaire was used to determine the type of values a participant endorses. In this 14 item questionnaire, participants had to choose between 14 pairs of opposing principles. In each

pair, the choice of either two poles was elicited on a 5- point likert-type scale with a neutral option, for example

*“Which of the two following principles is more important to you?”*

*Honesty: very important – important – equal – important – very important: success*

Following procedures outlined by Strack and Gennerich (2011), a confirmatory factor analysis (PCA) with orthogonal rotation (varimax) produced two factors which explained 38.43% of the item variance: (1) Openness to Change versus Conservation; and (2) Self-Transcendence versus Self-Enhancement. Factor scores were derived for each participant.

**Personal values: Good Self-Assessment Scale (Barriga et al., 2001).** This scale measures the centrality of moral traits to an individual’s self-understanding. It consists of 16 questions which ask the participant “How important is it to you that you are ...?” Eight questions contain a moral characteristic (e.g., How important is it to you that you are honest), the other eight include a non-moral, but desirable characteristic (e.g., sociable). Participants rated each item on a scale from 1 (not important to me) to 5 (extremely important to me).

Two scores were derived: personal moral values ( $\alpha=.73$ ), and personal non moral values ( $\alpha=.62$ ). A moral self-importance score was derived by subtracting the non-moral values score from the moral values score. A positive moral self-importance score indicates that moral values are more personally important to a person, a negative score indicates that non-moral values are more important to a person.

**Culture orientation: Values Survey Module (VSM) (Hofstede et al., 2013).** The Values Survey Module 2013 (VSM 2013) is a 30-item questionnaire developed for comparing culturally influenced values and sentiments of similar respondents from two or more countries. It allows scores to be computed on six dimensions of national culture, on the basis of four questions per dimension. The other six questions ask for demographic information. This scale

designed to measure six dimensions of culture power distance (large vs. small), individualism vs. collectivism, masculinity vs. femininity, uncertainty avoidance (strong vs. weak), long- vs. short-term orientation, and indulgence vs. restraint. All content questions are scored on five-point scales (1-2-3-4-5). A statistical computer program was used to calculate mean scores on five-point scales for each dimension. Each dimension has formula to calculate dimension scores for each country (not individual). The scale has excellent validity and reliability and has been widely used in cross-cultural research (Rajh et al., 2016 & Anjum et al., 2014).

#### Power distance index

The index formula is:  $PDI = 35(m07 - m02) + 25(m20 - m23) + C(pd)$

In which m02 is the mean score for question 02, etc. The index normally has a range of about 100 points between very small Power Distance and very large Power Distance countries. C(pd) is a constant (positive or negative) that depends on the nature of the samples; it does not affect the comparison between countries. It can be chosen by the user to shift her/his PDI scores to values between 0 and 100.

#### Individualism Index (IDV)

The index formula is:  $IDV = 35(m04 - m01) + 35(m09 - m06) + C(ic)$

In which m01 is the mean score for question 01, etc. The index normally has a range of about 100 points between strongly collectivist and strongly individualist countries. C(ic) is a constant (positive or negative) that depends on the nature of the samples; it does not affect the comparison between countries. It can be chosen by the user to shift his/her IDV scores to values between 0 and 100.

#### Masculinity Index (MAS)

The index formula is:  $MAS = 35(m05 - m03) + 35(m08 - m10) + C(mf)$

In which m05 is the mean score for question 05, etc. index normally has a range of about 100 points between strongly feminine and strongly masculine countries. C(mf) is a constant (positive or negative) that depends on the nature of the samples; it does not affect the comparison between countries. It can be chosen by the user to shift her/his MAS scores to values between 0 and 100.

#### Uncertainty Avoidance Index (UAI)

The index formula is:  $UAI = 40(m18 - m15) + 25(m21 - m24) + C(ua)$

In which m18 is the mean score for question 18, etc. The index normally has a range of about 100 points between weak Uncertainty Avoidance and strong Uncertainty Avoidance countries. C(ua) is a constant (positive or negative) that depends on the nature of the samples; it does not affect the comparison between countries. It can be chosen by the user to shift his/her UAI scores to values between 0 and 100.

#### Long Term Orientation Index (LTO)

The index formula is:  $LTO = 40(m13 - m14) + 25(m19 - m22) + C(ls)$

In which m13 is the mean score for question 13, etc. The index normally has a range of about 100 points between very short term oriented and very long term oriented countries. C(ls) is a constant (positive or negative) that depends on the nature of the samples; it does not affect the comparison between countries. It can be chosen by the user to shift her/his LTO scores to values between 0 and 100.

#### Indulgence versus Restraint Index (IVR)

The index formula is:  $IVR = 35(m12 - m11) + 40(m17 - m16) + C(ir)$

In which m11 is the mean score for question 11, etc. The index normally has a range of about 100 points between high indulgence and high restraint. C(ir) is a constant (positive or

negative) that depends on the nature of the samples; it does not affect the comparison between countries. It can be chosen by the user to shift her/his IVR scores to values between 0 and 100.

## Results

### Descriptive statistics

The means and standard deviations of the main study variables are shown in Table 4.1. A number of independent-samples t-tests were conducted to compare the main variables by culture (see Table 4.1). Concerning moral judgment, there were no significant cultural differences in the harm and fairness foundations. However, Saudi participants scored significantly higher on the ingroup, authority, and purity foundations.

Table 4.1. Means and standard deviations of the main variables by culture

	Saudi Arabia (N = 53)		United Kingdom (N = 48)		
Variables	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>t, p</i>
Moral Judgment					
Harm	6.87	1.20	7.20	1.07	-1.42, .156
Fairness	6.62	1.31	6.38	1.04	1.04, .303
Ingroup	7.31	.68	5.66	1.17	8.77, .000
Authority	6.51	1.27	4.03	1.42	9.24, .000
Purity	7.22	.89	6.15	1.24	5.00, .000



Personal moral values	3.37	.37	3.38	.40	-.04, .968
Personal nonmoral values	3.12	.39	2.78	.44	4.11, .000
Moral self-relevance	.25	.38	.59	.52	-3.81, .000
Openness to Change versus Conservation	.60	.82	-.64	.73	7.99, .000
Self-Transcendence versus Self-Enhancement	.10	1.14	-.11	.81	1.11, .269
Honesty task 1	3.00	1.60	3.41	1.44	-1.36, .175
Honesty task 2	2.62	1.11	2.66	.80	-.22, .822
Deception	.30	.60	.16	.42	1.28, .204

Regarding personal values, there were no differences between the two samples in personal moral values. However, UK scored higher than Saudi participants on moral self-relevance and Saudi scored higher than UK participants on personal non-moral values. Regarding general values, participants from the UK scored higher on openness to change and self-transcendence values than participants from Saudi Arabia. But participants from Saudi Arabia scored higher in self-enhancement and conservation values than participants from the UK.

In terms of cultural orientation, participants from Saudi Arabia scored higher in power distance than participants from the UK. UK participants scored higher in individualism and masculinity indexes than Saudi participants. However, Saudi participants scored higher in uncertainty avoidance, long term orientation, and indulgence versus restraint indexes (see Table 4.2).

Table 4.2. Country scores for Hofstede cultural dimensions.

Dimension	Saudi Arabia	UK
Power distance	19.85	3.35
Individualism versus collectivism	84.3	94.45
Masculinity versus femininity	-4.55	4.9
Uncertainty avoidance	34.55	12.55
Long-term versus short-term orientation	-20.6	-25.5
Indulgence versus restraint	79.1	67.95

According to the Hofstede website (n.d.), each dimension scale runs from 0 - 100 with 50 as a midlevel. If a score is under 50 the culture scores relatively low on that scale and if a score is over 50 the culture scores high on that scale. Based on this range, Saudi Arabia with a score of 20 and UK with a score of 3 are considered low on power distance. Both cultures believe that inequalities between individuals in society should be reduced. Saudi Arabia with a score of 84 and UK with score of 94 on Individualism index are considered individualistic cultures. In both cultures, individuals are independent and assumed to look after themselves and their direct family only. Saudi Arabia (score of -4) and UK (score of 5) both scored low on masculinity index indicating that Saudi Arabia and UK are feminist cultures. In both cultures the controlling values are caring for others and quality of life which can be seen as sign of success. On uncertainty avoidance index, Saudi Arabia scored 35 and UK scored 13 which are considered Low on uncertainty avoidance. Low scores on uncertainty avoidance means that individuals in both cultures are quite happy to wake up not knowing what the day brings. Saudi and British people are comfortable in mysterious situations. Saudi Arabia scored -21 and UK scored -26 on

long term orientation versus short term orientation and considered low on this index. Individuals from both cultures prefer to preserve time-honoured traditions and standards while doubting societal change. On the indulgence versus restraint index, Saudi Arabia scored 79 and UK scored 68 and both considered high on this index. Saudi and British cultures are classified as indulgent. Individuals from culture classified by a high score in Indulgence usually show willingness to perceive their impulses and desires with regard to enjoying life and having fun. Furthermore, they give a higher level of importance on leisure time (see Table 4.2). It is important to note that Hofstede's model of national culture consists of six dimensions and each dimension represent distinct preferences for one side over another that differentiate countries (rather than individuals) from each other (Hofstede, 2017).

Regarding the honesty task, participants from the UK scored higher in the number of figures they reported as doable in the first honesty task than participants from Saudi Arabia. In the first honesty task, four figures were actually doable. As can be seen from Table 4.1, the mean number of figures reported as doable were below four. Participants from Saudi Arabia scored higher in the number of figures they reported as doable in the second honesty task than participants from the UK. In the second honesty task, three figures were doable. Again, the means in Table 4.1 indicate that the mean doable figures participants reported as doable were below three.

From the honesty task, I created two variables: For Deception1, every participant who reported being able to do more than 4 figures on the first honesty task (the doable figures is 4) received a score of 1, those who reported being able to do 4 and below received a 0. Similarly, for Deception2, every participants who reported being able to do more than 3 figures received a score of 1, those who reported being able to do 3 and below got a 0. The two deception variables were significantly correlated, Cramer's  $V(102) = .32$ ,  $p = .001$ , and were therefore merged into

one variable, Deception. A score of 2 indicates that participants engaged in deception on both tasks, a score of 1 indicates that participants engaged in deception on one task, and a score of 0 that participants did not engage in deception. Saudi and UK participants did not significantly differ on deception (see Table 4.1).

### Correlations between study variables

Table 4.3 shows the correlations between moral judgment in the five moral foundations, moral sensitivity, general values, and deception across both cultural samples. Deception did not correlate significantly with any of the five foundation-specific moral judgments. Moral sensitivity correlated negatively with moral judgment in the ingroup foundation. The more participants endorsed conservation values, the less they rated moral judgment in the harm foundation, but the more they subscribed to moral judgment in the ingroup, authority, and purity foundations. No other correlations reached statistical significance.

Table 4.3. *Correlation between the moral foundations, moral sensitivity, general values, and deception in both samples*

	Harm	Fairness	Ingroup	Authority	Purity
Deception	-.04	.05	.10	.07	.02
Moral sensitivity	.17	.01	-.24*	-.14	-.06
Openness to change versus Conservation	-.36**	-.17	.48**	.39**	.38**
Self- Transcendence versus self-Enhancement	-.86	-.00	-.16	-.17	-.16

Tables 4.4 and 4.5 show the correlations between the same variables separately for Saudi and UK participants. The more Saudi participants endorsed conservation values, the more they rated moral judgment in the purity foundation, but the less they subscribed to moral judgment in the harm and fairness foundations. Furthermore, self-enhancement values were negatively correlated with moral judgment in the ingroup and authority foundation. No other correlations reached statistical significance.

Among UK participants, deception correlated negatively with moral judgment in the harm foundation. The more UK participants subscribed to self-enhancement values, the less they endorsed moral judgment in the ingroup, authority, and purity foundations. No other correlations reached statistical significance.

Table 4.4. *Correlation between the moral foundations, moral sensitivity, general values, and deception in Saudi Arabia*

	Harm	Fairness	Ingroup	Authority	Purity
Deception	.13	.04	.05	.07	-.18
Moral sensitivity	.09	.03	-.03	.13	.10
Openness to change versus Conservation	-.40**	-.41**	-.02	-.16	.36**
Self- Transcendence versus Self-Enhancement	-.07	-.01	-.28*	-.33*	-.15

Table 4.5. *Correlation between the moral foundations, moral sensitivity, general values, and deception in the UK*

	Harm	Fairness	Ingroup	Authority	Purity
Deception	-.32*	.05	-.01	.15	.01
Moral sensitivity	.18	.07	-.00	.13	.11
Openness to change	-.26	-.16	.27	.11	-.04
versus Conservation					
Self- Transcendence	-.05	-.04	-.40**	-.36*	-.35*
versus Self-Enhancement					

### **Predicting deception**

A linear regression analysis was conducted to examine the relationship between deception and potential predictors such as nationality, gender, moral judgment, moral sensitivity, and general values. At Step 1, gender and nationality were entered into the model. At Step 2, the five mean-centred moral foundations, mean-centred moral sensitivity, and the two general value variables were additionally entered. At Step 3, the interactions between the five mean-centred moral foundations and nationality, the interaction between the mean-centred moral sensitivity and nationality, and the interactions between the mean-centred general values and nationality were additionally added. As can be seen in Table 4.6, none of the independent variables predicted deception at Step 1 or at Step 2. However, at Step 3, Nationality marginally predicted deception, with Saudi participants engaging in marginally more deception than UK participants. Participants high in the harm moral foundation deceived less. Furthermore, the interactions between Harm x Nationality and Authority x Nationality significantly predicted deception.

Table 4.6. Results of Regression Analysis Predicting Deception.

Independent variables	$\beta$	$\Delta R^2, p$
Step 1		.02, .42
Nationality	.11	
Gender	.04	
Step 2		.03, .94
Nationality	.22	
Gender	.07	
Moral judgment: Harm	-.06	
Moral judgment: Fairness	.09	
Moral judgment: Ingroup	-.00	
Moral judgment: Authority	-.10	
Moral judgment: Purity	-.01	
Moral sensitivity	.10	
Conservation vs. openness	-.04	
Self-transcendence vs. self-enhancement	-.12	
Step 3		.16, .05
Nationality	.39†	
Gender	.04	
Moral judgment: Harm	-.49*	
Moral judgment: Fairness	.32	
Moral judgment: Ingroup	-.16	
Moral judgment: Authority	.17	

Moral judgment: Purity	.01
Moral sensitivity	-.04
Conservation vs. openness	-.17
Self-transcendence vs. self-enhancement	-.30
Moral judgment: Harm x Nationality	.63**
Moral judgment: Fairness x Nationality	-.25
Moral judgment: Ingroup x Nationality	.07
Moral judgment: Authority x Nationality	-.40*
Moral judgment: Purity x Nationality	.05
Moral sensitivity x Nationality	.17
Conservation vs. openness x Nationality	.11
Self-transcendence vs. self-enhancement x Nationality	.16

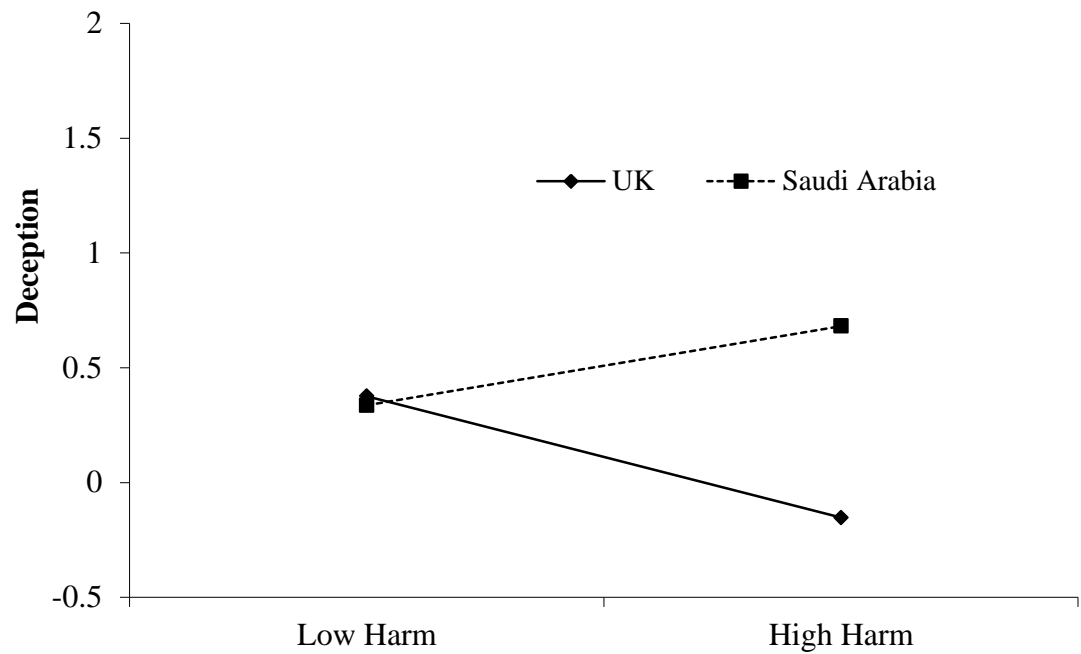
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These significant interactions were followed up with simple-slope analyses. Concerning the Harm x Nationality interaction, Figure 4.2 shows that in Saudi Arabia, deception significantly increased the more participants endorsed the Harm moral foundation,  $\beta = .16$ ,  $t(97) = 2.00$ ,  $p = .05$ . In the UK, deception decreased, the more participants endorsed the Harm moral foundation,  $\beta = -.23$ ,  $t(97) = -2.37$ ,  $p = .02$ .

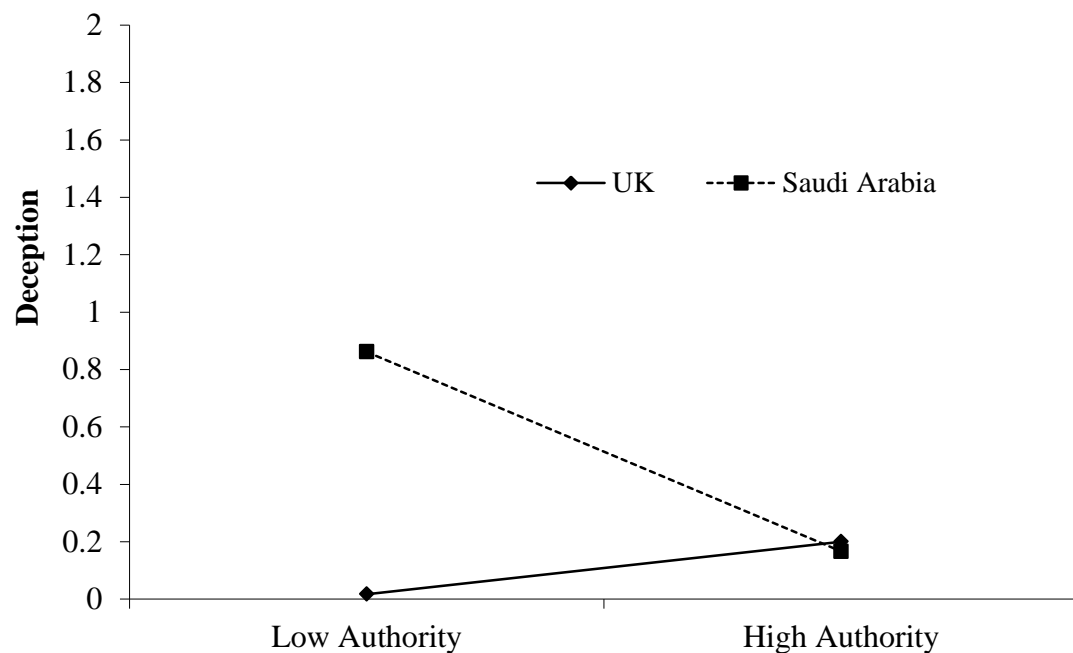
Concerning the Authority x Nationality interaction, Figure 4.3 indicates that among those low in endorsing the authority foundation, deception was higher in Saudi Arabia than the UK. Among UK participants, there was no difference in deception among those low or high in the endorsement of authority,  $\beta = .05$ ,  $t(97) = .71$ ,  $p = .48$ . However, among Saudi participants, those



high in the endorsement of authority engaged significantly less in deception than those low in the endorsement of authority,  $\beta = -.19$ ,  $t(97) = -2.45$ ,  $p = .02$ .



**Figure 4.2: Harm x Nationality interaction**



**Figure 4.3: Authority x nationality interaction**

### **Moderated mediation of deception**

I examined whether moral sensitivity mediated the relationship between moral judgment in five moral foundations (harm, fairness, ingroup, authority, and purity) and deception. Furthermore, given the cultural differences we found in participants' moral judgments and moral sensitivity, Nationality was entered as a moderator, moderating the relationship between moral judgment and deception and moral sensitivity and deception. An overview of the conceptual model for this analysis as well as the regression paths analysed is shown in Figure 4.4. A moderated-mediation analysis was run in PROCESS (Hayes, 2013) using a bias-corrected bootstrap approach (1000 bootstraps) to calculate 95% confidence intervals (CI). If the 95% CI limits do not include zero, the effect is interpreted as being significantly different from zero.

Results indicate that moral sensitivity did not mediate the relationship between moral judgment in any of the five moral domains and deception. Some of the moderations reached statistical significance, but these findings were generally in line with the regression analysis reported above. Full results of the moderated mediation can be found in Table 4.7.

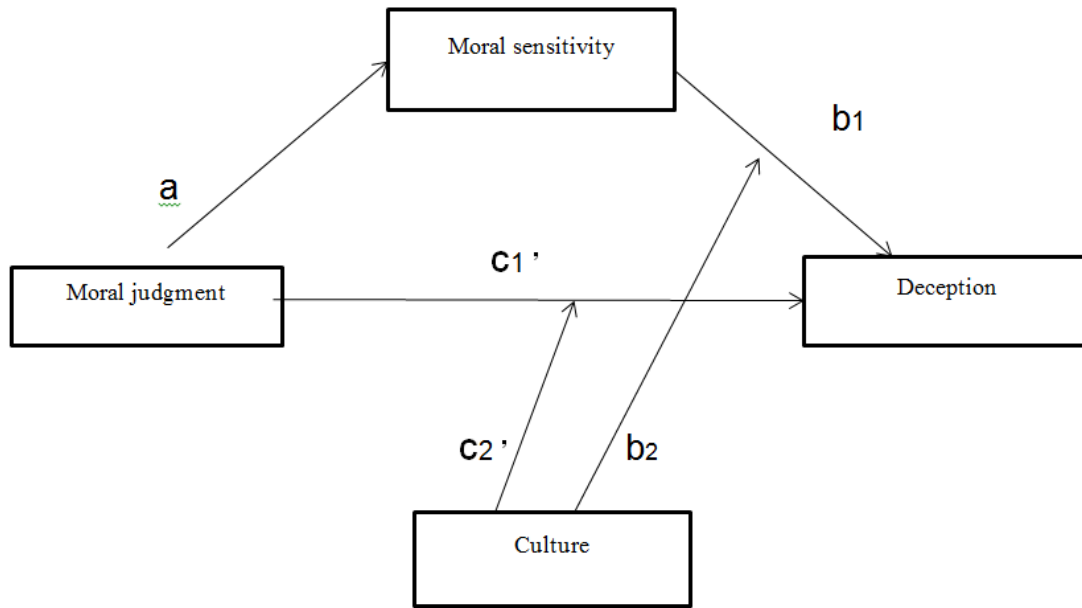


Figure 4.4: Moderated mediation of deception

Table 4.7: Results of moderated mediation analyses

Path	<i>B (SE), p</i>	95% <i>CI</i>
Moral judgment: Harm foundation		
<i>a</i>	.07 (.04), .08	-.00, .15
<i>b<sub>1</sub></i>	.42 (.04), .30	-.38, 1.23
<i>c<sub>1</sub>'</i>	.25 (.14), .07	-.02, .53
<i>b<sub>2</sub></i>	-.18 (.24), .45	-.65, .29

$c_2'$	-19 (.09), .04	-.38, -.00
<hr/> Moral judgment: Fairness foundation		
$a$	.00 (.04), .91	-.07, .08
$b_1$	.50 (.41), .22	-.31, 1.32
$c_1'$	.01 (.13), .94	-.25, .28
$b_2$	-.25 (.24), .30	-.73, .23
$c_2'$	.00 (.09), .94	-.18, .19
<hr/> Moral judgment: Ingroup foundation		
$a$	-.09 (.03), .01	-.17, -.02
$b_1$	.51 (.41), .22	-.30, 1.33
$c_1'$	.11 (.22), .61	-.33, .56
$b_2$	-.25 (.24), .30	-.73, .23
$c_2'$	-.05 (.12), .64	-.31, .19
<hr/> Moral judgment: Authority foundation		
$a$	-.03 (.02), .13	-.09, .01
$b_1$	.61 (.40), .13	-.19, 1.42
$c_1'$	-.24 (.12), .05	-.49, .00
$b_2$	-.31 (.24), .19	-.80, .16
$c_2'$	.14 (.07), .06	-.01, .30
<hr/> Moral judgment: Purity foundation		
$a$	-.02 (.04), .49	-.10, .05
$b_1$	.53 (.41), .20	-.29, 1.35
$c_1'$	-.10 (.17), .55	-.45, .24

$b_2$	-.26 (.24), .28	-.75, .22
$c_2'$	.05 (.10), .60	-.15, .26

## Discussion

The main goal of Study 3 was to assess whether the relationships between prosocial moral behaviour, moral identity, moral judgment in the five moral foundations, and values identified in Study 2 would also hold for a perfect moral duty, namely honesty. To that end, I employed a new behavioural honesty task that was conceptually similar to matrix games (see Mazar et al., 2008). Furthermore, Study 3 investigated cross-cultural differences in these variables and their relationships by testing participants from Saudi Arabia and the UK.

### Cross-cultural differences in honesty

This study was based on behavioural test of honesty to a measure participant's honesty. Participants were asked to reproduce 8 (in the first honesty task) or 6 figures (in the second honesty task) without lifting their pen or retracing the same lines. Four (first task) or three (second task) of these graphs could have been reproduced/ drawn without lifting the pen ("doable graphs"); four/three graphs were not do-able without lifting the pen ("non-doable graphs"). Even though dishonesty (i.e., reporting more graphs as doable than there were actual doable graphs) was financially valuable to participants, on average dishonesty was not very common. While there was a slight tendency for Saudi participants to deceive more than UK participants, this difference was not statistically significant.

According to the meta-analysis by Gerlach (2017), the vast majority of behavioural experimental research on deception has been conducted in North America, Western Europe, or Israel, and no study has employed matrix games or similar honesty tasks in an Arab culture. Triandis (1995) suggested that being honest when dealing with strangers might be more appreciated in individualist countries, such as UK, while having good relationships are more important in collectivist countries, such as Saudi Arabia. According to this hypothesis, we might expect UK participants to be more honest in the experimental task (an interaction between strangers) than Saudi participants, but this expectation was not supported by the data. We do know, from previous research (e.g., Gino et al., 2010, 2013; Mazar et al., 2008) and meta-analysis (e.g., Abeler et al., 2016; Gerlach, 2017) that (dis)honest behaviour is easily affected by situational factors, such as primes (e.g. moral v. non-moral), the investigative setting (e.g., field v. lab experiment), and the payoffs that can be gained. I did not systematically vary these factors in the current study. It might be, for example, that the payoff used was of a different value in Saudi Arabia and the UK. Future research might want to systematically modify these conditions to explore the boundary conditions of dis(honest) behaviour in a non-Western, Arab culture.

### **Moral functioning and (dis)honesty**

**Moral judgment and (dis)honesty.** Similar to the results reported in Chapters 2 and 3, the endorsement of ingroup, authority, and purity moral foundations was higher among Saudi than UK participants. There was no difference in the endorsement of moral foundations related to harm and fairness. These results are in line with Graham and colleagues (2011) who showed that participants in western cultures such as United Kingdom and Canada gave little importance to purity and ingroup foundations while participants from Asia and the Middle East valued and endorsed ingroup, authority and purity more than western participants.

There has been a long-standing debate as to whether moral judgments predict people's moral behaviour. Bay and Greenberg (2001) examined the relationship between moral judgment and moral behaviour (deception). The results showed different findings for each gender. For female participants, deceptive behaviour increased when moral judgment scores increased. For male participants, moderate scores of moral judgment related to low rate of deception behaviour while higher and lower scores of moral judgment related to higher rate of deception behaviour. Other research (e.g., Grimm, Kohlberg, & White, 1968; Malinowski & Smith, 1985) showed that the higher the moral reasoning of an individual the lower the occurrence of cheating in games. However, cheating behaviour in these studies was not tested in experimental tasks (Newstead et al., 1996).

In our study, (dis)honesty was not predicted or correlated significantly with any of the five foundation-specific moral judgments across both cultural samples. However, culture moderated the relationship between deception and moral judgment in some of the moral foundations. In the UK, moral judgment in the harm foundation correlated negatively with deception: Those who strongly endorsed moral judgments in the harm foundation cheated less than those with a low endorsement of the harm foundation. This finding is in line with those of Bersoff (1999) who showed that emphasizing the negative outcomes of cheating for another person decreases dishonesty. Interestingly, in Saudi Arabia, the opposite relationship was found: Those who highly endorsed the harm moral foundation cheated more than those with a low endorsement of harm. This result is not easily explained without knowing how participants conceptualized the experimental situation. It might be that the situational framing of the dishonesty task was different for Saudi and UK participants, and that this different frame influenced participants' behaviour. Again, replicating some of the experimental condition employed in honesty tasks in western cultures might shed some light on this question.

Culture also moderated the relationship between moral judgment in the authority foundation and (dis)honesty. While among UK participants there was no difference in dishonesty between those low and high in authority endorsement, among Saudi participants those who endorsed authority moral judgments more cheated significantly less. As discussed above, in collectivistic societies honesty is regarded more important in close personal relationships than in relationships among strangers (Triandis, 1995). Thus, the binding moral foundations, ingroup, authority, and purity, might be more predictive of honesty in the collectivistic Saudi Arabia than the more individualistic UK. Furthermore, my data across all empirical studies (see Chapter 2, 3) so far consistently indicates that Saudi Arabia is a more vertical society than the UK with steeper social hierarchies and higher power distance scores. Thus, deference to authority and the endorsements of such values might be more indicative for moral behaviour in Saudi than in UK culture. Another indication “traditional” values might be more influential among Saudi than UK participants comes from the correlation between the value dimension “Openness to change versus Conservation”. Those who scored higher on “Conservation” values deceived less, particularly in Saudi Arabia.

**Moral identity and dishonesty.** According to Blasi (2005), moral judgments influence moral behaviour through moral identity. Moral judgment should be personalised and personally important in order to influence moral behaviour. Indeed, Study 2 (Chapter 3) indicated that the relationship between foundation-specific moral judgment and prosocial moral behaviour (giving to charities) was mediated by participants’ moral sensitivity/identity. Study 3 investigated whether a similar relationship would hold for a negative moral duty, honesty. The results of Study 3 indicate that this was not the case: Moral sensitivity did not mediate the relationship between moral judgments and dishonesty. While I replicated the findings from Study 2 (Chapter 3) that UK participants were higher in moral sensitivity than Saudi participants, no significant



results emerged from the moderated mediations of linking moral judgments to dishonest behaviour. One interpretation of these differential patterns is that moral identity was correlated with measures that had a self-presentational or social desirability dimension such as (giving to charities). Furthermore, the presence of honest behaviour might be not central to our participants' self-concept in the current study. According to Bersoff (1999), in situations that involve small acts of social violation individuals usually deviate the moral consequences of their wanted behavioural reaction and behave in opposite way to these motivations.

Another interpretation of the differential influence of moral identity found in Studies 2 and 3 concerns the conceptualization of moral duties. As discussed above, giving to charity is an imperfect moral duty for which people have some sort of choice as to whether and towards whom they want to fulfil it. In contrast, honesty is a negative moral duty that we owe to everybody (see Kant, 1785). It might be that moral identity, or the personal relevance of a moral duty, might be particularly influential when people have more personal choice or “moral wiggle room” as to whether they implement a moral behaviour or not. Indeed, Johnston and Krettenauer (2011) found that moral self-importance (i.e., moral identity) served as mediator when predicting prosocial but not anti-social behaviour in adolescents. Whether having “moral wiggle room” is the one of the underlying factors for this effect should be studied in future research.

## **Conclusion**

Although the study has reached its goals and brought to light some interesting findings, it naturally has limitations. First, the data were not from representative samples as participants in the present study were university students in both samples. As discussed above, this could results into sample biased, which could limit the generalisability of the findings. Second, lack of prior studies on this topic in the Middle Eastern context made it hard to make assumptions regarding

the study variables. More studies are needed in moral foundation theory and in the Middle East region. Third, some of the measures used in this study to collect data were designed in western cultures and applied in western and non-western cultures for the lack of measures designed for non-western populations. For example, general values and moral judgment measures have been developed for or used in previous studies in the Middle Eastern context (Knafo et al., 2008; Schwartz, 1992, 2006; Saucier et al., 2015). However, the moral identity measure was not used in previous studies with Middle Eastern sample. Even though the current study successfully employed moral behaviour in two different cultures, other measures of moral behaviour and moral identity should be used in future research to replicate and support the existing findings. Furthermore, how some of the situational factors employed in past research with western samples affect Saudi participants' honest behaviour can be a fruitful endeavour for future studies. All of this will help in understanding the cross-cultural similarities and differences in honesty.

## **Chapter 5:**

### **Study 4: The relationship between moral emotions and moral foundation violations.**

#### **Introduction**

Researchers are divided when considering morality as a construct that is built on our rationality or our emotionality (Rozin et al., 1999). This question has not just been debated in psychology, but has also a long history in philosophy. For example, during the enlightenment period, philosophers, such as Immanuel Kant, stipulated that people's moral motives were controlled by reason and rationality, whereas David Hume and Adam Smith, for instance, regarded the moral sentiment of sympathy as critical for especially altruistic and prosocial actions. In psychology, most of the early work on morality and moral development (e.g., by Piaget, 1965; Kohlberg, 1969; & Turiel, 1983) concentrated on rationality. As discussed in Chapter 1, Kohlberg (1969) believed that moral reasoning underlies people's moral judgments and actions, and the six moral reasoning stages Kohlberg proposed represent ever-more sophisticated ways of integrating the (human) rights of those affected by a moral dilemma. But this focus on rationality shifted to the role moral emotions since the 1980s, and some researchers assumed that emotions work as the base of moral development, judgment, and behaviour (Blair, 1995; Turiel & Killen, 2010; Haidt, 2001; Prinz, 2007). Current theories of moral psychology agree that emotions have an important

role to play in people's moral functioning. Consequently, the research reported in this Chapter investigates emotional components in moral foundations theory. Additionally, I investigated whether the emotions associated with morality in the five moral foundations differ across cultures.

### **Emotions in cross-cultural psychology**

Emotions are what we experience within ourselves and sense in others (Berry et al., 2002). Emotions are fast, and they last few seconds or minutes unlike moods which last longer. Feelings and emotions can be distinguished from each other. Feelings are considered as part of emotions while emotion includes more parts than feelings such as physiological reactions (increased heart rate), expressive behaviours (facial expressions), behavioural intentions (moving toward an object), and cognitive changes (Matsumoto & Juang, 2013). Emotions are systems that enable fast information processing to help us behave with conscious thinking (Tooby & Cosmides, 2008). For example, eating rotten meat has a negative effect on our health, and the disgust emotion helps us to take an action by not eating it or vomiting to take them out of our body. Because of their role in action preparation or avoidance, emotions have been linked to moral judgment and moral behaviour.

According to Berry et al. (2002), the study of emotions in a cross-cultural context is split to three paradigms. The first group of researchers would consider emotions as universal constructs based on culture-comparative studies that showed cross-cultural similarities in the expression of emotions in the face, the voice, and in gestures (Berry et al., 2002). The second group would consider emotions as cultural constructs based on ethnographic accounts and linguistic analysis. For example, Lutz (1988) in her ethnographic analysis of the emotional life of the Ifaluk in the South Pacific assumed that fago (an amalgam of compassion, love, and sadness) and song

(justifiable anger) are not found in the USA (Berry et al., 2002). The third group combines this culturally universalist and relativist approaches. These researchers (e.g., Mesquita et al., 1997) would consider emotions as a series of components such as antecedent event, appraisal, subjective feelings, and physiological reaction, and across cultures we can find similarities and differences in each emotion components. For example, Scherer et al. (1988) assumed that there were major differences between USA, Europe, and Japan participants in the importance of eliciting situations related to four emotions (joy, sadness, anger, fear).

If one follows such more culture-specific approaches to emotions, then culture can affect emotions in several ways (Matsumoto & Juang, 2013). First, culture might adjust our biologically-based basic emotions. Human beings are assumed to be born with a set of basic emotions that are biologically inherent. Those emotions are expressed universally in all humans through facial expressions. However, culture creates rules, guidelines, and norms that regulates emotions and influences the core basic emotion system to maintain social coordination. Second, cultures help to structure unique emotional experiences that involve emotions more than the basic emotions. People in collectivistic cultures, such as Japan tend to express more socially engaging emotions such as friendliness, respect, sympathy, and guilt more than socially disengaging emotions such as pride, self-esteem, or frustration (Kitayama, Mesquita, & Karasawa, 2006). Third, cultures help to structure unique thoughts, notions, standpoints, and values about emotion. For example, European-Americans tend to appreciate high arousal positive feeling such as excitement, while Chinese tend to appreciate low arousal positive feeling such as calmness. Individuals in collectivistic cultures tend to incorporate emotions with social worth evaluation, while individuals in individualistic cultures tend to incorporate emotions with

individual evaluation of the environment. Culture affects these sides of emotion because they are depending on language and higher cognitive functions (Matsumoto & Juang, 2013).

Emotions are assumed to motivate behaviour based on two models (Blasi, 1999). The first model assumes that emotions are the link between motivational systems (drives, needs, goals) and environmental conditions. The second model assumes that emotions, when aroused, are linked to behaviours that decrease the discomfort produced by arousal. The two models consider the idea of emotions producing behaviour as an outcome of motivational process such as goals, needs, and values (Blasi, 1999).

### **Emotions and morality across culture**

Avramova and Inbar (2013) outlined three claims regarding the effect of emotions on moral judgment. Based on the first claim, emotions follow moral judgment. For example, experiencing an immoral action can produce negative emotions (e.g., anger, sadness) while experiencing moral action can produce positive emotions (e.g., happiness, relief). Most evidence supporting this claim comes from studies examining emotional reactions to moral violations. For example, functional imaging research showed that brain areas linked with emotional reactions are activated when participants evaluate or judge moral behaviour (Greene et al., 2001; Moll et al., 2003). What is interesting about this claim is the idea of a specific relationship between certain moral violations and certain emotions. Based on the second claim, emotions amplify moral judgment especially related to actions that violate normal moral rules (Avramova & Inbar, 2013). For example, immoral actions would be judged as more immoral under the influence of certain emotions. Most evidence supporting this claim comes from studies that examine people's decisions in moral dilemmas and studies that measure moral judgment after presenting moral violations scenarios or experimentally inducing emotions (Greene et al., 2009; Goldberg et al.,

1999; & Horberg et al., 2011). These studies found that moral violations are perceived as more or less harsh based on the perceiver's current emotional status. For example, Goldberg et al. (1999) found that observing moral transgression such as watching a video of a man beating up a helpless teenager triggers moral anger, which results in enhancement of punitiveness in subsequent judgments of unrelated transgressions (by a different perpetrator). Based on the third claim, emotions could moralize nonmorality actions. Empirical evidence for each one of these models is presented below.

**Model 1: Moral judgment is associated with certain emotions.** In four studies, Rozin et al. (1999) examined whether violations associated with the three moral codes outlined by Shweder et al. (1997) was associated with certain emotions, such as anger, contempt, and disgust. Shweder et al. (1997) claimed that cultures differ in the dominance of the three moral codes autonomy (individual freedom), community (hierarchy), and divinity (purity). Rozin et al. (1999) assumed that there is a link between anger and autonomy (individual rights violations), contempt and community (violation of communal codes, including hierarchy), and disgust and divinity (violations of purity-sanctity). In the first study, students from the United States and Japan were given a list of situations that involved a moral transgression and were asked to assign either an appropriate emotional facial expression or an appropriate emotion word (contempt, anger, and disgust). The findings support the hypothesis of the link between moral codes and moral emotions. In the second study, students from the United States and Japan were asked to read a list of 46 situations and to rate them based on the three moral codes. The findings again supported the linkage between the three emotions and moral violations of the three moral codes. In the third study, students from the United States were asked to rate how bad the person in the question would feel in each situation to explore the influence of seriousness or negativity of situation. The findings showed that autonomy violations were rated most negatively in the

United States where the autonomy code of morality dominates. Shweder et al. (1997) assumed that cultures differ in the dominance of the three moral codes. In the fourth study, twenty students from the United States were asked to read each of the situations and produce the face that fits with each situation. The findings strongly support the link hypothesis. Results showed correlations between frequency of facial action units of American students and violations of community, autonomy, and divinity. Furthermore, the results showed that action units appropriate for contempt correlated highly with community ratings, with the same predictions for anger and autonomy, disgust and divinity.

Li et al. (2016) investigated Rozin et al.'s (1999) CAD model and moral foundation theory in China, especially the relationship between moral judgment and moral emotions. They presented 156 moral situations to participants and asked them about the relevance of each situation to moral foundations and to assign moral emotions to each situation. The findings support the applicability of the CAD model and MFT in China. The results showed that among Chinese participants, violations of harm and fairness foundations tended to trigger anger; violations of ingroup and authority foundations tended to trigger contempt; and violations of purity foundation tended to trigger disgust.

Mikula et al. (1998) examined which emotions were correlated with judgments of fairness or (in-) justice. They found that anger, and to a lesser degree disgust, correlated with perceptions of unfairness, but that sadness, fear, guilt, and shame were not significantly associated with fairness judgments.

Harenski and Hamann (2006) investigated the neural correlates of negative emotions associated with moral violations. First, they compared emotion regulation for two types of negative emotional stimuli: moral violations and non-moral violations. Second, they assessed



whether brain activation in the medial prefrontal cortex (an area involved in moral reasoning) and amygdala might reflect greater social and emotional content. During regulation, the results showed that diverse types of activation in these brain regions were observed for moral vs. non-moral violation pictures. Moreover, the results showed that viewing pictures of moral and non-moral violations produced similar brain activations in regions involved in social and emotional processing. However, attempts to decrease emotional responses to moral and non-moral violations (for example, a car accident scene could be explained as a scene from a movie that was not real) activated different brain regions involved in cognitive and emotional processing. These results suggest that the neural correlations of emotional responses are modified by (the type of) moral violations.

**Model 2: Emotions amplify moral judgment.** Emotions are a strong motivator and regularly influence moral judgment (Haidt, 2012; Haidt et al., 1993). The relationship between moral judgment and emotions is not a general relationship. It is rather a relationship between certain emotions and certain types of moral judgment (Haidt, 2003; Weiner, 2006). Haidt (2003) assumed that moral emotions can be classified into four categories: self-critical, other-suffering, other-praising, and other-critical. Contempt, anger, and disgust emotions are classified as other-critical emotions as they involve disapproval of others. Shame, guilt, and embarrassment emotions are classified as self-critical emotions as they involve assessments of the self. Sympathy, empathy, and pity are classified as other-suffering emotions as they result from other's suffering. Gratitude and elevation emotions are classified as other-praising emotions as they result from others' virtuous actions.

Horberg et al. (2011) assumed that certain emotions amplify moral judgment. In line with Haidt (2003), they suggest that particular emotions are related to and affect certain types of moral

violations or virtuous actions. Table 5.1 gives an overview of this link between specific emotions and sociomoral concerns. According to Horberg et al. (2011), research has especially investigated the link between negative emotions, such as disgust and anger, and moral judgment. How emotions such as pride, guilt, and shame affect moral judgment is less studied. Concerning the influence of disgust on moral judgment, a paradigmatic study by Schnall et al. (2008) induced participants to physical disgust using exposure to bad smell, watching a disgusting movie, or sitting in a dirty room. The results of experiment 1 showed that disgust can increase the intensity of moral judgment compared to a control group. The results of experiments 2 and 3 showed that disgust makes moral evaluations more intense. The results of experiment 4 showed that induced disgust made moral evaluation more intense than did induced sadness. In conclusion, in all these experiments induced disgust led to more severe moral judgment compared to a neutral or sad mood.

Table 5.1. The linkage between emotions and sociomoral concerns

Emotions	Sociomoral concern
Disgust	Purity of body and mind
Anger	Justice, rights, autonomy
Contempt	Community role, duty
Compassion	Harm/care, weakness, need
Pride	Hierarchy, status, merit
Guilt	Own transgression
Shame	Own characterological flaw
Gratitude	Reciprocity

Awe, elevation	Other's virtue
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Horberg et al. (2009) proposed that disgust amplifies the moral significance of purity of the body and the soul. They showed that disgust predicted stronger moral judgment of purity violations and anger predicted stronger moral judgment of justice violations. Furthermore, induced disgust moralized (i.e., amplified) the purity foundation more than induced sadness. However, disgust did not affect moral judgments in the harm foundation, and sadness did not affect moral judgments in the purity foundation. The third study showed that disgust predicted stronger moral judgment of purity foundation compared to anger and fear emotions. These results confirmed the domain specificity of the disgust-purity linkage.

Other studies investigated the effect of specific emotions on moral judgments more widely. Martinez and Jaeger (2016) examined the influence of specific moral emotions, such as anger, guilt, and gratitude, on moral judgments among German participants. The results revealed that guilt increased moral judgment. This finding is in line with Kim et al. (2009) who found that people who were more likely to feel guilt were also more likely to judge the purchase of forbidden products as morally wrong. Furthermore, guilt had a negative impact on the intention of buying grey-market products. In addition, gratitude had a negative effect on moral judgment. However, anger had no influence on moral judgment (Martinez & Jaeger, 2016).

According to Cameron et al.'s (2015) review of the literature, the link between specific emotions and the intensity of moral judgment is still under debate. Twenty-five articles claimed a link between moral judgment and a certain emotions. However, only a few studies proposed exclusive relationship between types of moral judgment and types of emotions. In some of these studies (e.g., Horberg et al., 2009; Russell et al., 2013), disgust was indeed linked to purity or

divinity moral judgment, anger was linked to autonomy moral judgment, and contempt was linked to community moral judgment. On the other hand, most of the studies on moral judgment and emotions did not support this exclusive emotion-moral judgment relationship. For example, disgust was similarly related to harm and fairness moral judgment and non-moral political judgments (Cameron et al., 2013; Feinberg et al., 2014).

Relatedly, Cheng et al. (2013) found that it is not a specific emotion (e.g., disgust) that enhances moral condemnations for certain types of moral violation, but rather emotional arousal. In three experiments, the authors found that arousal amplified the intensity of moral condemnations, but the emotion-specificity hypothesis was not supported. Similarly, Tyszka and Zaleskiewicz (2012) found that the strength of an emotion affected moral judgments. Furthermore, intense moral emotions triggered by moral transgressions made individuals less sensitive to take a risk.

It should be noted that some studies found that certain emotions can intensify reactions to immoral actions. For example, Gummerum et al. (2016) examined the influence of incidental anger on costly third –party punishment decisions. The results showed that participants in an angry mood punished unequal distributions significantly more than participants in a neutral. Thus, anger intensified moral actions that had real effects on the actor’s financial payoffs.

**Model 3: Emotions “moralize” non-moral actions.** The strongest evidence supporting model 3 comes from a study by Wheatley and Haidt (2005). They hypnotized participants to feel disgust and then presented them with scenarios of moral violations and scenarios that did not describe moral violation. They found that feelings of disgust led to stronger moral judgments for both scenarios. Thus, feelings of disgust “moralized” non-moral violations.

Hutcherson and Gross (2011) adapted the third model employing a social-functionalist perspective which distinguish between the three emotions of anger, disgust, and contempt, based on their appraisals and consequences. The study hypothesized that moral disgust would be associated with all types of moral violations after making clear the distinction between social and non-social disgust. The results showed that moral disgust was associated with all type of moral violations. Moreover, the three emotions were related to different consequences. For instance, participants considered disgust as the most damaging emotion in terms of consequences because it is not easy to undo disgust and is the indicator of an individual's moral character. Anger was considered the most easily cured emotion because it involves certain actions and possibly emerged from a misunderstanding.

### **The Present Study**

In this research, I will draw on model 1 and will investigate which emotions are associated with the five different moral foundations in Saudi Arabia and the UK. As Graham et al. (2009) pointed out, moral foundations theory is an extension of Shweder et al.'s (1999) big three theory in that the moral domain is widened beyond the concepts of promoting justice and avoiding harm. However, besides the study of Li et al. (2016), the relationship between moral foundations and associated emotions has not been investigated. As discussed above, among Chinese participants, violations of harm and fairness foundations tend to trigger anger; violations of ingroup and authority foundations tend to trigger contempt; and violations of purity foundation tend to trigger disgust.

A number of studies (Graham et al., 2011) as well as my own research reported in Chapters 2 to 4 have found cross-cultural differences in moral foundations: Saudi participants tended to endorse ingroup, authority, and purity foundations more strongly compared to British

participants who showed no differences in the endorsement of the five moral foundations. The present study followed up on these results and had three main goals: First, I explored the link between moral emotions and moral foundation violations. More specifically, I assessed the link between five different moral foundation violations (harm, justice, ingroup, authority, and purity) and anger, disgust, sadness, apathy, guilt, contempt, shame, resentment, and embarrassment emotions. Given the findings by Rozin et al., (1999), we might expect that violations of harm and fairness foundations trigger anger; violations of ingroup and authority foundations trigger contempt; and violations of purity foundation trigger disgust. Second, I am interested in exploring which moral violations are considered as non-moral violations by participants in the two cultural samples. Given the findings by Graham et al. (2011), we might expect cross-cultural differences in defining moral violations. Participants from the Saudi sample might be expected to define violations related to ingroup, authority, and purity foundations as moral violations. Third, I am interested in exploring cross-cultural differences in linking certain emotions to moral foundation violations. In line with Lie et al. (2016), I expect similarities between Saudi and British participants in what emotions are linked to moral foundation violations.

## **Method**

### **Participants**

The study comprised 120 participants. Adults aged 18 years and older participated. The Saudi sample consisted of 60 participants ( $M_{Age} = 23$  years,  $SD = 3.07$ , 30 females, 58 males). The British sample consisted of 60 participants ( $M_{Age} = 22$  years,  $SD = 3.70$ , 59 females, 13 males).

### **Procedure**

In the UK, participants were recruited through the University's participant pool which mainly contains students. In Saudi Arabia, participants were recruited by approaching students on

campus. This study was done online. After agreement to participate they were then send the link of the study.

Participants were presented with a brief of the study. After signing the consent form, participants were presented with a list of 40 situations depicting moral violations associated with the moral foundations of harm, justice, ingroup, authority, and purity or no violation found either in English or Arabic. Participants had to sort these violations and were asked which emotion is likely felt by the observer for each violation. At the end, participants were presented with a debrief and were paid a show-up fee. The whole study took no longer than 30 minutes.

## **Measures**

**Demographics and background information.** Participants were asked to report their age, gender, and nationality.

**Moral foundation classification task** (Rozin et al. 1999 ; Graham et al. 2009, 2011).

This task was used in this study to assess the link between moral foundations and moral violations. Participants read situation which depicted moral violations related to the five moral foundations (see Graham et al., 2009, 2011). For example, a moral violation related to the harm foundation was “A man kicked a dog in the head hardly”.. A full list of the 40 violations can be found in Appendix D.3. For each situation, participants had to decide which moral foundation was violated (from the point of view of the observer) or whether no moral violation was depicted in the situation. Their choice for moral foundations is: harm/care violations; justice/reciprocity violations; ingroup/ loyalty violations; authority/ respect violations; purity/ sanctity violations and no violation.

**Moral judgment and emotions task** (Rozin et al., 1999; Graham et al., 2009, 2011). After each violation participants were presented with a list of moral emotions (anger, disgust, contempt, sadness, guilt, shame, embarrassment, apathy, and resentment). Participants had to rate how likely each emotion is felt by the observer on a 5-point Likert scale (1-not at all to 5-extremely).

## **Results**

The following analyses closely follow those by Rozin et al. (1999) and Graham et al. (2009, 2011), as this study was modelled on theirs. I first investigated whether participants classified the 40 (moral) violations according to the five moral foundations as suggested by Graham et al. (2009). Tables 5.2 and 5.3 show the classification of the moral violations for Saudi and British participants, respectively. As can be seen in Table 5.2, the majority of assignments of the violations made by Saudi participants corresponded to the original classifications of the 40 violation by Graham et al. (2009). Thus, violations that were classified as constituting a violation of the harm foundation by Graham et al. (2009) were largely classified by Saudi participants as a violation of the harm foundation, etc. Interestingly, violations of the harm foundations were also often classified as violations of purity by Saudi participants and vice versa. Similarly, UK participants (see Table 5.3) largely assigned the 40 moral violations to the moral foundations suggested by Graham et al. (2009). In both samples, violations of the “binding foundations” (i.e., violations that Graham et al., 2009, classified as violations of authority, ingroup, and purity) were more likely to be regarded as “no violations than violations related to the harm and justice foundation.



Table 5.2. Frequency (%) of assignment of the 40 violations to the five moral foundations according to Graham et al. (2009) and by participants in Saudi Arabia. The most common assignment is highlighted in bold-face type. Because of multiple responses, percentages can exceed 100%.

Classification to moral foundations by Graham et al. (2009)	Assignment to moral foundation made by participants					
	Harm	Justice	Ingroup	Authoriy	Purity	No violation
Harm	<b>272</b> <b>(170)</b>	107 (45)	63 (84)	74 (56)	124 (90)	64 (40)
Justice	72 (67)	<b>264</b> <b>(165)</b>	142 (34)	94 (48)	87 (26)	45 (28)
Ingroup	135 (39)	55 (89)	<b>203</b> <b>(127)</b>	76 (66)	71 (27)	164 (103)
Authority	89 (46)	77 (59)	105 (48)	<b>138</b> <b>(86)</b>	87 (18)	<b>208</b> <b>(130)</b>
Purity	144 (78)	41 (54)	43 (44)	28 (54)	<b>259</b> <b>(162)</b>	189 (118)

Table 5.3. Frequency (%) of assignment of the 40 violations to the five moral foundations according to Graham et al. (2009) and by participants in the United Kingdom. The most common assignment is highlighted in bold-face type. Because of multiple responses, percentages can exceed 100%.

Classification to moral foundations by Graham et al. (2009)	Assignment to moral foundation made by participants					
	Harm	Justice	Ingroup	Authoriy	Purity	No violation
Harm	<b>272</b> <b>(170)</b>	100 (46)	40 (71)	69 (18)	52 (26)	43 (40)
Justice	73 (63)	<b>271</b> <b>(169)</b>	94 (10)	52 (21)	30 (11)	56 (35)
Ingroup	114 (25)	16 (59)	<b>215</b> <b>(134)</b>	31 (38)	8 (14)	192 (120)
Authority	29 (43)	33 (33)	61 (19)	<b>228</b> <b>(143)</b>	29 (11)	<b>196</b> <b>(122)</b>
Purity	42 (33)	18 (19)	22 (5)	18 (18)	<b>229</b> <b>(187)</b>	177 (111)

I next investigated which moral emotions were assigned to the 40 violations. Table 5.4 shows the highest-rated and lowest-rated (moral) emotion for each one of the 40 violations by culture. For the harm foundation, the highest-rated moral emotion in the Saudi sample was resentment but in the UK sample it was anger; the lowest-rated moral emotion in both the Saudi and the UK samples was apathy. For the justice foundation, the highest-rated moral emotion in

Saudi sample was resentment but in the UK sample it was anger and disgust; the lowest-rated moral emotion in both the Saudi and the UK samples was apathy. For the ingroup foundation, the highest-rated moral emotion in the Saudi sample was a mix of sadness, resentment, and apathy, and the UK sample it was a mix of sadness, anger, and apathy; the lowest-rated moral emotion in the Saudi sample was apathy and disgust but in the UK sample were contempt and guilt. For the authority foundation, the highest-rated moral emotions in the Saudi sample were resentment and apathy, but in the UK sample was anger and apathy; the lowest-rated moral emotion in Saudi was guilt, in the UK sample it was guilt and contempt. For the purity foundation, the highest-rated moral emotion in Saudi and the UK samples were disgust, the lowest-rated moral emotion in Saudi sample was apathy but in the UK sample was guilt.

Table 5.4. Predominant moral emotions for each item in each culture.

No.	Moral violation	Saudi Arabia		UK	
	items	Highest	Lowest	Highest	Lowest
Harm foundation					
	Kick a dog	Resentment	Apathy	Anger	Apathy
	Animal killing	Resentment	Apathy	Anger	Apathy
	Overweight person	Resentment	Apathy	Anger	Apathy
	Stick pin	Anger	Apathy	Anger	Apathy
	Scolding child	Anger	Shame	Anger	Contempt
	beating wife	Resentment	Apathy	Anger	Apathy
	cyanide	Anger		Disgust	
	World War II	Resentment	Apathy	Sadness	Apathy
Justice foundation					

Helping friend	Resentment	Apathy	Anger	Contempt
Box of ballots	Resentment	Apathy	Anger	Apathy
hiring pledge	Anger	Apathy	Disgust	Apathy
Edging line	Anger	Apathy	Anger	Sadness
stealing	Anger	Apathy	Anger	Apathy
Bank embezzled	Disgust	Apathy	Disgust	Apathy
Fake injury	Resentment	Apathy	Disgust	Apathy
smoking	Resentment	Apathy	Disgust	Sadness
Ingroup foundation				
Country flag	Resentment & Anger	Apathy	Disgust	Guilt
Radio talk	Anger	Apathy	Anger	Guilt
Communications break	Sadness	Embarrassment	Sadness	Embarrassment
citizenship	Apathy	Disgust	Apathy	Embarrassment
Social group	Sadness	Disgust	Sadness	Disgust
teenager	Apathy	Guilt	Apathy	contempt
Bus seat	Resentment	Apathy	Disgust	Apathy
funeral	Sadness	Apathy	Sadness	Contempt
Authority foundation				
cursing	Resentment	Embarrassment	Anger	Contempt & Guilt
Hand gesture	Resentment	Apathy	Anger	Sadness

Rotten tomato	Disgust	Guilt	Anger	Guilt
Dirty words	Resentment	Apathy	Disgust	Contempt
salesman	Apathy	Guilt	Apathy	Anger
complaint	Resentment	Sadness	Apathy	Guilt
President chair	Apathy	Disgust	Apathy	Disgust
Scold employer	Resentment	Guilt	Anger	Contempt
Purity foundation				
Rotten meat	Disgust	Anger	Disgust	Contempt
Touching corpse	Disgust	Embarrassment	Disgust	Contempt
Apple worm	Disgust	Shame	Disgust	Resentment
sex	Disgust	Apathy	Disgust	Apathy
Eating dog	Disgust	Apathy	Disgust	Apathy
Spine surgery	Apathy	Guilt	Disgust	Guilt
Blood transfusion	Disgust	Apathy	Disgust	Guilt
Art performance	Disgust	Apathy	Disgust	Guilt

Table 5.5 shows the mean emotional ratings for all the violations in the respective foundations by culture. Table 5.6 shows the mean emotion ratings of all violations in the respective foundations across the two cultures. A number of independent-samples t-tests were conducted to compare the emotion ratings by culture (see Table 5.5). Concerning violations in the harm foundation, there were no significant cultural differences in the rating of sadness, apathy, shame, and embarrassment. However, Saudi participants assigned significantly more contempt, guilt, and resentment, while UK participants assigned significantly more anger and disgust.

Concerning the justice foundation, there were no significant cultural differences in assigning disgust. However, Saudi participants rated sadness, apathy, anger, guilt, contempt, shame, embarrassment, and resentment significantly higher than UK participants.

For the ingroup foundation, all moral emotions were rated as significantly higher by, Saudi than UK participants (see Table 5.5). Similarly, for the authority foundation, Saudi participants rated all nine moral emotions as significantly higher than UK participants. Concerning the purity foundation, there were no significant cultural differences in assigning embarrassment and disgust. However, Saudi participants assigned significantly more sadness, apathy, anger, guilt, contempt, shame, and resentment than UK participants to the purity foundation.

Table 5.5. Means and standard deviations of assignment of the nine moral emotions to violations in the five moral foundations by culture.

Foundation & emotions	Saudi Arabia		United Kingdom		
	(N= 88)		(N= 72)		
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>t, p</i>
Harm					
Sadness	3.74	.84	3.90	.65	-1.25, .211
Apathy	2.56	.96	2.31	1.01	1.59, .112
Anger	3.80	.64	4.23	.48	-4.70, .000
Guilt	3.21	1.01	2.86	1.07	2.09, .037
Contempt	3.51	.80	2.70	1.13	5.29, .000
Shame	3.31	.96	3.37	1.03	-.33, .735
Resentment	3.90	.68	3.57	.84	2.68, .008

Embarrassment	2.95	1.02	2.71	1.06	1.43, .153
Disgust	3.64	.85	4.20	.56	-4.76, .000
<hr/> Justice					
Sadness	3.26	.98	2.65	.78	4.26, .000
Apathy	2.61	.88	2.20	.87	2.90, .004
Anger	3.65	.68	3.31	.74	2.94, .004
Guilt	2.97	1.00	2.38	.90	3.84, .000
Contempt	3.35	.87	2.31	.81	7.77, .000
Shame	3.37	.95	2.81	.88	3.73, .000
Resentment	3.76	.79	2.86	.84	6.91, .000
Embarrassment	2.99	1.05	2.44	.89	3.50, .001
Disgust	3.44	.96	3.23	.70	1.51, .131
<hr/> Ingroup					
Sadness	3.25	.80	2.68	.69	4.79, .000
Apathy	2.60	.77	2.19	.75	3.36, .001
Anger	3.15	.75	2.33	.68	7.06, .000
Guilt	2.72	.91	2.01	.76	5.20, .000
Contempt	2.97	.82	1.94	.71	8.36, .000
Shame	2.95	.88	2.30	.79	4.84, .000
Resentment	3.29	.73	2.22	.67	9.57, .000
Embarrassment	2.73	.93	2.07	.73	4.87, .000
Disgust	2.92	.89	2.31	.69	4.76, .000
<hr/> Authority					

Sadness	2.71	.84	1.96	.72	5.95, .000
Apathy	2.68	.73	2.29	.84	3.13, .002
Anger	2.83	.75	2.24	.78	4.87, .000
Guilt	2.45	.87	1.84	.79	4.53, .000
Contempt	2.79	.83	1.87	.68	7.54, .000
Shame	2.71	.84	2.05	.74	5.16, .000
Resentment	2.95	.70	2.06	.75	7.62, .000
Embarrassment	2.63	.90	2.06	.74	4.26, .000
Disgust	2.76	.80	2.21	.69	4.56, .000

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Purity

Sadness	3.06	.95	2.40	.74	4.80, .000
Apathy	2.69	.82	2.04	.72	5.29, .000
Anger	2.90	.87	2.25	.71	5.06, .000
Guilt	2.74	.89	1.93	.78	6.01, .000
Contempt	2.96	.82	1.91	.69	8.57, .000
Shame	2.88	.90	2.42	.87	3.25, .001
Resentment	3.27	.81	2.07	.74	9.63, .000
Embarrassment	2.76	.93	2.54	.90	1.54, .125
Disgust	3.53	.74	3.44	.69	.76, .446

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Table 5.6. Means and standard deviations of assignment of the nine moral emotions to the five moral foundations for both cultures.

Foundation & emotions		Total (N= 120)	
		<i>M</i>	<i>SD</i>
Harm			
	Anger	4.00	.60
	Disgust	2.56	.78
	Sadness	3.82	.76
	Resentment	3.75	.77
	Shame	3.34	.98
	Contempt	3.15	1.04
	Guilt	3.06	1.04
	Embarrassment	2.85	1.04
	Apathy	2.46	.99
Justice			
	Anger	3.50	.72
	Resentment	3.36	.93
	Disgust	3.36	.85
	Shame	3.12	.96
	Sadness	2.99	.94
	Contempt	2.89	.99
	Embarrassment	2.75	1.02

Guilt	2.71	1.00
Apathy	2.43	.89
<hr/> Ingroup		
Sadness	2.99	.80
Resentment	2.80	.88
Anger	2.77	.83
Shame	2.65	.89
Disgust	2.64	.86
Contempt	2.50	.92
Embarrassment	2.43	.90
Apathy	2.42	.79
Guilt	2.40	.91
<hr/> Authority		
Anger	2.56	.81
Resentment	2.54	.84
Disgust	2.51	.80
Apathy	2.50	.80
Shame	2.41	.86
Contempt	2.38	.88
Embarrassment	2.37	.87
Sadness	2.37	.86
Guilt	2.17	.88
<hr/> Purity		

Disgust	3.51	.73
Sadness	2.77	.92
Resentment	2.75	.99
Shame	2.69	.92
Embarrassment	2.67	.93
Anger	2.62	.87
Contempt	2.50	.93
Apathy	2.41	.84
Guilt	2.39	.94

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I next conducted a multivariate analysis of variance with nationality and foundation as independent variables and the nine emotions as dependent variables. The findings revealed significant associations between foundation and emotions (Roy's largest root=0.877,  $F(9, 785) = 76.510$ ,  $p < .000$ ). Therefore, we can conclude that emotions were significantly dependent on foundations. Furthermore, the findings revealed significant associations between nationality and emotions (Roy's largest root=.708,  $F(9, 782) = 61.477$ ,  $p < .000$ ). There was a statistically significant difference in emotions based on the nationality. The interaction between foundation, nationality, and emotions was significant (Roy's largest root=.166,  $F(9, 785) = 14.470$ ,  $p < .000$ ). There was a statistically significant difference in emotions based on the interaction between nationality and foundation.

Foundation had statistically significant effects on sadness ( $F(4, 790) = 70.42$ ;  $p < .000$ ), anger ( $F(4, 790) = 129.90$ ;  $p < .000$ ), guilt ( $F(4, 790) = 23.44$ ;  $p < .000$ ), contempt ( $F(4, 790) = 24.41$ ;  $p < .000$ ), shame ( $F(4, 790) = 30.13$ ;  $p < .000$ ), resentment ( $F(4, 790) = 71.50$ ;  $p < .000$ ),

embarrassment ( $F(4, 790) = 7.90; p < .000$ ), disgust ( $F(4, 790) = 95.94; p < .000$ ). In harm and justice foundations anger was rated significantly higher and apathy was rated significantly lower. In ingroup foundation sadness was rated significantly higher and guilt was rated significantly lower. In authority foundation anger was significantly higher and guilt was rated significantly lower. In purity foundation disgust was rated significantly higher and guilt was rated significantly lower. However, there was no significant effect on apathy ( $F(4, 790) = .45; p < .768$ ).

Nationality had statistically significant effects on sadness ( $F(1, 790) = 70.79; p < .000$ ), apathy ( $F(1, 790) = .49; p < .768$ ), anger ( $F(1, 790) = 58.63; p < .000$ ), guilt ( $F(1, 790) = 88.84; p < .000$ ), contempt ( $F(1, 790) = 272.36; p < .000$ ), shame ( $F(1, 790) = 50.85; p < .000$ ), resentment ( $F(1, 790) = 262.74; p < .000$ ), embarrassment ( $F(1, 790) = 45.72; p < .000$ ), disgust ( $F(1, 790) = 10.58; p < .001$ ). There were cultural differences in the ratings of all emotions. The most-highly rated emotions for Saudi participants were resentment, disgust, and anger, while the most-highly rated emotions for UK participants were disgust, anger, and apathy.

The interaction between foundation and nationality had statistically significant effect on sadness ( $F(4, 790) = 7.86; p < .000$ ), anger ( $F(4, 790) = 18.35; p < .000$ ), shame ( $F(4, 790) = 4.30; p < .002$ ), resentment ( $F(4, 790) = 7.65; p < .000$ ), disgust ( $F(4, 790) = 14.36; p < .000$ ). However, there was no significant effect on apathy ( $F(4, 790) = 1.17; p < .322$ ), guilt ( $F(4, 790) = 1.40; p < .231$ ), contempt ( $F(4, 790) = .61; p < .652$ ), embarrassment ( $F(4, 790) = 1.84; p < .118$ ). Saudi participants rated resentment significantly higher in the harm, justice, ingroup, and authority foundations and disgust in the purity foundation. UK participants rated anger significantly higher in the harm and justice foundations, sadness in the ingroup foundation, apathy in the authority foundation, and disgust in the purity foundation (see Table 5.5).

## **Discussion**

The main goal of Study 4 was to investigate the relationship between moral emotions (anger, disgust, sadness, apathy, guilt, contempt, shame, resentment, and embarrassment) and five moral foundation violations (harm, justice, ingroup, authority, and purity) in Saudi Arabia and the UK. This study was modelled on Rozin et al. (1999) CAD theory and Graham et al. (2009, 2011) moral foundation theory. In addition, this study aimed at investigating cross-cultural differences in linking certain emotions to moral foundation violations.

### **Moral emotions and moral foundations**

In this study participants were asked to read situations and decide which moral foundation was being violated or whether no moral violation was committed. After each violation participant was asked to rate how likely a range of emotions was felt by the observer from a list of moral emotions. Rozin et al. (1999) reported that there was a relationship between anger and autonomy moral violations, contempt and community moral violations, and disgust and divinity moral violations. In addition, Li et al. (2016) tested Rozin et al.'s (1999) CAD model and moral foundation theory in China and the findings support the applicability of the CAD model and MFT in China. Among Chinese participants, violations of harm and fairness foundations triggered anger; violations of ingroup and authority foundations triggered contempt; and violations of purity foundation triggered disgust. The results of the current study partly supported our hypothesis and these previous findings. As expected, violations of harm, and justice foundations triggered anger and violations of purity foundation triggered disgust. These results are partly in line with those of Horberg et al. (2009) who assumed that disgust predicts stronger moral judgment of purity violations and anger predicts stronger moral judgment of justice violations. However, in the current study, violations of authority foundation triggered anger and

violations of ingroup foundation triggered sadness. Possible interpretation for the this unexpected result is that anger considered the most easily cured emotion as it contains certain actions and possibly arise from a misunderstanding (Hutcherson & Gross, 2011). Another interpretation is that experiencing an immoral action can result in negative emotions such as, sadness and anger (Avramova & Inbar, 2013). Furthermore, recent studies on moral judgment and emotions such as Cameron et al. (2013) and Feinberg et al. (2014) did not support this exclusive emotion-moral judgment relationship. In addition, this study used appropriate comparison method that allows non-exclusive relationship between certain moral judgment and certain emotion to appear. For example, participants had to rate the intensity of nine emotions rather than pick the most appropriate emotions out of a list of nine.

### **Cross-cultural differences in moral emotions and moral foundation**

**The classification of moral violations.** As expected, few cultural differences were found in the assignments of the violations made by both samples. Saudi and UK participants' classifications were largely in agreement with the original classifications of the 40 violation by Graham et al. (2009). This indicates that, across cultures, there seems to be good understanding of what kind of immoral actions constitute violations in the five moral domains. However, violations of the harm foundations were often classified as violations of purity by Saudi participants and vice versa. This result might be explained by the fact that cultures differ in the importance of the different five moral foundations. It might also indicate that the moral foundations of harm and purity might share some definitional overlap in religious societies. For example, Shweder et al. (1991) compared what types of actions constituted moral or conventional violations in a sample of secular North-American adults and in a sample of religious Hindus in India. Indian participants often classified actions as moral violations that North-Americans would classify as violations of

conventions or as no violations at all, for example, a widow eating fish or a son cutting his hair after his father's death. Often these actions violated religious and spiritual beliefs, and with these actions the violators did not just transgress these beliefs but actively (spiritually) harmed either themselves or the soul of recently deceased close relative. Thus, it would be interesting to investigate whether there is a closer overlap between harm and purity foundations in people with certain religious or spiritual beliefs. One way to do that would be to ask participants for reasons as to why they think a specific action constitutes a harm/purity foundation.

Participants in both samples were more likely to regard actions that Graham et al. (2009) considered as violations of ingroup, authority, and purity foundations not as moral violations than violations of the harm and justice foundations. It would be interesting to know whether participants did not regard these actions as violations at all or whether they viewed them as violations of social conventions, for example (Turiel, 1983). As discussed above, moral domain theory (e.g., Turiel) differentiates between a moral and a social conventional domain. While moral violations are wrong for everybody everywhere regardless of institutional rules and arrangements, social-conventional violations depend on arrangements in social relationships, institutions, and organizations, and these arrangements can be subject to change. Shweder et al. (1991) found that US adults sharply differentiate between moral and social-conventional rules, while participants from India view most violations as moral violations. Again, asking participants for reasons for their assignment can shed light on this interesting and unexpected finding.

**Moral emotions and moral foundation violations.** Rozin et al. (1999) and Li et al. (2016) reported no cultural differences in the link between anger and autonomy, contempt and community, and disgust and divinity. However, the results of the current study showed cultural

differences in this link. In the Saudi sample, the harm and justice foundations triggered resentment, the ingroup foundation triggered sadness, resentment, and apathy, the authority foundation triggered resentment, and apathy, and the purity foundation triggered disgust. In the UK sample, the harm foundation triggered anger, the justice foundation triggered anger and disgust, the ingroup foundation triggered sadness, anger, and apathy, the authority foundation triggered anger, and apathy, and the purity foundation triggered disgust. Thus, while there were some differences, the findings for the UK participants are more in line with previous research by Rozin et al. (1999) and Li et al. (2016). It is interesting to consider the found differences for the ingroup and authority foundation. Sadness is an emotion that is often associated when focusing on the victim of a violation (e.g., Haidt, 2003). In contrast to anger, for example, sadness does not lead an actor to approach a violator and punish a violation. It is possible that for the ingroup foundation, UK and Saudi participants focus on the victim of the violation while at the same time not acting on behalf of the victim. In that sense, sadness is a rather “helpless” moral emotion that does not necessarily lead to taking action on behalf of a victim.

One of the most common emotions assigned by Saudi participants in four of the five moral foundations was resentment. Resentment shares many overlapping features with anger and contempt, but these emotions differ in one key aspect, namely the status of the wrong-doer (Haidt, 2003). Resentment is aimed at people with a perceived higher status, anger at people with equal status, contempt at people with lower status than the evaluator. I did not manipulate status differences between the participants and the described actors. However, it might be that Saudi participants’ default assumption was that the violator was of higher status. This interpretation should be further explored in future research, for example by explicitly manipulating the status of the observer and actor.



## **Limitation and conclusion**

The findings from this study attempted to make several contributions to enhance our knowledge in the field of emotions and morality. First, explanations regarding the relationship between emotions and moral foundation violations were provided. Our findings show that the violations of harm, and justice foundations triggered anger and violations of purity foundation triggered disgust. These results suggest that the relationship between emotions and moral violations is not exclusive as Cameron et al. (2013) and Feinberg et al. (2014) assumed.

Second, this study has been important in providing explanation regarding cross-cultural differences in which moral violations are considered non-moral violations by participants in the two cultural samples. The results show no cultural differences in the assignments of the violations made by both samples. Saudi and UK participants' classifications were in agreement with the original classifications of the 40 violation by Graham et al. (2009). However, both samples regarded behaviours that Graham et al. (2009) considered as non-moral violations as violations of the three binding moral foundations. It is important to note that the majority of studies on the association between emotions and moral transgression only tested this association while this study tested additionally the original classification made by Graham et al. (2009).

Third, this study provided support for the existence of cross-cultural differences in linking certain emotions to moral foundation violations. In the Saudi sample, individualising foundations triggered resentment, ingroup foundation triggered sadness, resentment, and apathy, authority foundation triggered resentment, and apathy, and purity foundation triggered disgust. In the UK sample, harm foundation triggered anger, justice foundation triggered anger and disgust, ingroup foundation triggered sadness, anger, and apathy, authority foundation triggered anger, and apathy, and purity foundation triggered disgust. It is important to take into consideration that this study

used appropriate comparison method that allows non-exclusive relationship between certain moral judgment and certain emotion to appear.

The findings in this study are subject to three limitations. First, the data were not from representative sample as this present study was limited to university students in both samples. This limitation could result into sample biased, which could decrease the possibility of generalising the data. Clearly, these results need to be replicated in future research containing wide range of participants. Second, lack of prior cross-cultural studies on the relationship between emotions and moral foundation violations in the Middle East region might influence the base of our literature review. More cross-cultural studies are needed on this topic to form better assumption and analysis. Third, this study relied only on a self-reported data which can be subject to social desirability. A possible area of future research would be to investigate this relationship by combining self-report measures and experiments to avoid social desirability.

## **Chapter 6: General discussion**

### **Introduction**

The topic of morality and moral functioning has been debated and investigated by philosophers, psychologists, biologists, economists, as well as policy and religious leaders and teachers and parents for centuries. The main goal of this PhD was to contribute to this ongoing discussion. More specifically, the first aim of this PhD research was to explore the cultural differences in moral judgment, moral behaviour, moral identity, and cultural values between Saudi Arabia and United Kingdom. Furthermore, I was interested in the psychological factors affecting morality in those two cultures. To achieve the second aim of the present thesis I used a multi-method approach to explore the factors that might affect moral behaviour employing moral foundation theory such as the role of personality, values, emotions, and moral identity for individuals' moral judgments and moral behaviour in four empirical studies.

### **First study**

Study 1 was an exploratory study to guide us through the establishment of the next studies. The first goal of this study was to understand people's moral judgment in Saudi Arabia and the UK. The second goal of this study was to investigate whether and how personality traits and cultural values affect moral judgment. The third goal of this study was to investigate whether personality traits and cultural values were related differently or similarly across Saudi and UK cultures.

Indeed, Study 1 found cross-cultural differences in people's endorsement of the five moral foundations. Participants from Saudi Arabia endorsed the ingroup, authority, and purity

foundations more than UK participants, whereas there was a similar endorsement of harm and fairness foundations in both samples. We can conclude that the moral domain is “wider” in Saudi Arabia as it additionally includes ingroup, authority, and purity concerns than in the UK as it mainly includes harm and fairness concerns. These results are in line with cross-cultural studies in morality such as Graham and colleagues’ (2011) work, Kim et al. (2012), and Zhang and Li (2015). Graham et al. (2011) proposed that participants in eastern cultures such as South-East Asia endorse purity and ingroup foundations more than participants in western cultures such as United Kingdom. Similarly, Kim et al. (2012) assumed that Korean participants endorsed purity concerns more than American participants. Zhang and Li (2015) found that Chinese participants showed high endorsement of ingroup, authority, purity foundations and less endorsement of harm and fairness foundations. The differences in moral foundations scores between the two countries can be attributed to different reasons. First, Saudi Arabia is considered collectivist country while the UK is considered individualist country based on Hofstede’s (1980) study (see also [www.geerthofstede.com](http://www.geerthofstede.com)). Saudi participants scored higher on all binding moral foundations and they are all related to collectivistic cultures. UK participants scored higher on the individualizing moral foundations harm and fairness and they are related to individualistic cultures. A second important factor is the role that religion plays role in individuals’ morality. For example, Islam religion encourages group cohesiveness. Shah (2004) assumed that religiosity strongly influences the moral behaviour of teenagers. In this study each sample has different religion which might be the reason for the differences in authority, purity, and ingroup foundations.

I expected personality traits and values to contribute differently to moral relevance and moral judgment. Study 1’s results showed that personality traits and cultural values influenced moral

relevance and moral judgment in the moral foundations differently. Harm and fairness endorsements and moral judgments were predicted by personality traits while ingroup, authority, and purity predicted by cultural values. The results of this study assumed that personality traits and cultural values are two different constructs and would relate to other variables differently. Traits are considered fundamental determinants of behaviour, and are the basis of behavioural consistency across different situations and time (Parks-Leduc et al., 2015; Waters, 1981) and personality traits can be described as heritable but at the same time immune to social influences, such as parents and society (Caspi et al., 2005; Olver & Mooradian, 2003). These characterizations of personality traits propose that traits would relate more to the basic moral foundations harm and fairness. However, values are evaluations because they direct people's judgment in terms of their own and others' suitable behaviour. In addition, values can be arranged by personal importance, so people will act according to the most important values first. The characterization of values proposes that values would relate more to the additional moral foundations such as ingroup, authority, and purity.

The strength of the relationship between personality traits and cultural values was based on two elements: the nature of the traits and values and the content overlap between personality traits and cultural values. As indicated previously, Olver & Mooradian (2003) and Parks (2009) found that personality traits and cultural values have meaningful relationships. However, the findings from this study suggest that personality traits and cultural values are two different constructs. The results of Study 1 suggested the direction of all subsequent ones.

## **Second study**

The findings of Study 1 led to further investigations on moral domain across two cultures Saudi Arabia and United Kingdom. Study 2 had three main goals: First, to assess whether the

culture differences found in the first study for people's moral judgments in the five moral foundations could also be found for their actual moral behaviour; second, whether foundation-specific moral judgment predicted foundation-specific actual moral behaviour; third, whether participants' general values and moral self-importance mediated the relationship between moral judgment and moral behaviour (DG allocations) in the five moral foundations.

This study employed the dictator game to measure moral behaviour (charitable giving). I found that participant's donation depends on the framing of the receiving charity (harm, justice, ingroup, authority, and purity concerns). For example, a charity that supported families and children with a life-threatening disease succeeded in increasing DG allocation while a charity that supported young people's meaningful relationship decreased DG allocations. Participants allocated significantly more money in the Harm compared to all other conditions and less money in the neutral compared to all other conditions. No differences in the allocations between the justice, ingroup, and authority conditions. Furthermore, we found few cultural differences in allocations to the charities framed according to the different moral foundations. These findings contradict the results found for moral judgments and moral endorsements. Furthermore, the framing of these different charities was modelled on actual charities operating in the UK, and it might be that the aims and purposes of these fictional charities were not as common and influential in a Middle Eastern culture as in the UK.

Moral judgment predicted participant's moral behaviour in harm and authority foundations only. These results are in line with Kohlberg and Candee (1984) assumption that moral action is motivated by a moral reasoning and thus that higher level moral reasoning is correlated with more moral behaviour. However, moral judgment did not predict DG allocations in the justice, ingroup and purity foundations, following Gummerum et al. (2008) and Takezawa

et al. (2006) research that showed that children's, adolescents', and adults' costly allocation of resources was not predicted by the level of moral judgment. These results of the relationship between foundation-specific moral judgment and behaviour are mixed. In that sense we assessed the influence of another variable, moral identity, on moral behaviour.

As far I know the concept of moral identity within the framework of moral foundation theory has not been considered before. Based on other research on moral identity and the moral self (Kohlberg, 1969; Blasi, 2005), I proposed that moral judgments influence moral behaviour by being personally important and by being part of a person's identity. Since there were cultural differences in moral self-relevance and moral judgments in the five foundations between the British and Saudi participants, I additionally added nationality as a moderator which was expected to moderate the relationship between moral self-importance and moral behaviour (DG allocations) and moral judgment and moral behaviour.

The findings are consistent with the findings of past studies by Blasi (2005), Aquino & Reed (2002), Prat et al. (2003), and Hardy (2006). I found that personal moral values mediated the relationship between moral judgment and moral behaviour. Aquino and Reed (2002) and Hardy (2006) suggested that moral identity is related to moral behaviour such as money donations to charity. Therefore the judgment of right or wrong is not enough to turn this judgment to costly moral behaviour; a moral judgment needs to be important for a person's moral identity to affect moral behaviour (see Bergman, 2002). However, nationality did not moderated this relationship, suggesting the effect of personal moral values on moral behaviour was similar for British and Saudi participants. On the other hand, the effect of moral judgment on moral behaviour was moderated by nationality. The moral judgment of British sample positively significantly predicted DG allocations while the moral judgment of Saudi sample did

not predict DG allocations. While judging some behaviour as right or wrong might predict moral behaviour only in western societies, a personal importance of moral values seems to predict moral behaviour in cultures as different as the UK and Saudi Arabia.

Far too little attention has been paid to cross-cultural research on moral identity. We found that UK participants were higher than Saudi participants on moral identity. These results are consistent with the study by Jia (2016) who assumed that there are differences in moral identity between Canadian and Chinese participants. To our best knowledge no study has compared moral identity between western and Middle Eastern participants.

It appears from the aforementioned investigations that little attention has been paid to the relationship between general values and morality. Given the small number of studies on morality and general values and our previous results, one of the goals of the second study was to investigate the relationship between general values and moral judgment and behaviour. Results showed that the “openness to change versus conservation” values were not linked to moral behaviour, neither directly nor indirectly. However, the “self-transcendence versus self-enhancement” values mediated the relationship between moral judgment and DG allocations. Moral judgment predicted moral behaviour in those participants who scored high on self-transcendence. High scores on self-transcendence values would mean high endorsement of values such as social justice, equality, and helpfulness (Schwartz, 2012). All these previous values are linked to moral behaviour, and it is likely that they influence the relationship between moral judgment and moral behaviour.



### **Third study**

The results presented in Study 2 led to additional examination on the effects of moral judgment and moral identity on different type of moral behaviour across the two cultures. The main goal of Study 3 was to assess whether the relationships between prosocial moral behaviour, moral identity, moral judgment in the five moral foundations, and values identified in Study 2 would also hold for a perfect moral duty, namely honesty. In addition, Study 3 examined cross-cultural differences in these variables and their relationships on students from Saudi Arabia and the UK.

Regarding the debate on moral judgments prediction of moral behaviour, the previous results showed gender differences. For female participants, deceptive behaviour increased when moral judgment scores increased. For male participants, moderate scores of moral judgment related to low rate of deception behaviour while higher and lower scores of moral judgment related to higher rate of deception behaviour (Bay& Greenberg, 2001). Moreover, moral judgments in the five foundations did not predict (dis)honesty across both cultural samples. Richards et al. (1992) found that scores on tests measuring moral reasoning and moral judgment are not usually correlated with inclinations to behave in moral way such as helping others or following the rules. These results might suggest that moral behaviour might be motivated by factors other than moral reasoning ability. However, culture moderated the relationship between deception and moral judgment in harm and authority foundations. In the UK, strong endorsement of moral judgment in the harm foundation would indicate less cheating compared to those with a low endorsement of the harm foundation. In Saudi Arabia, the opposite relationship was found: strong endorsement of moral judgment in the harm foundation would indicate more cheating compared to those with a low endorsement of the harm foundation. Possible situational framing of the dishonesty task might cause these differences in the findings between Saudi and UK participants.

Culture also moderated the relationship between moral judgment in the authority foundation and (dis)honesty. In Saudi Arabia, strong endorsement of moral judgment in authority would indicate less cheating. In the UK, there was no difference in dishonesty between those low and high in authority endorsement. A possible explanation for this result is that in collectivistic societies honesty is more appreciated in personal relationships settings than in relationships among strangers (Triandis, 1995). Furthermore, the binding moral foundations, ingroup, authority, and purity, could be better predictor of honesty in the collectivistic Saudi Arabia than in the more individualistic UK. Thus, deference to authority and the endorsements of such values might be more indicative for moral behaviour in Saudi than in UK culture. Moreover, “traditional” values might be more affective among Saudi participants than UK participants comes from the correlation between the value dimensions “Openness to change versus Conservation”. High scores on “Conservation” values would indicate less deception, especially in Saudi Arabia.

Contrary to our expectations and Blasi’s assumption (2005) that moral judgments influence moral behaviour through moral identity, the results showed that moral identity did not mediate the relationship between moral judgments and dishonesty. There are possible explanations for this different pattern. First explanation is that moral identity measure was combined with measures that had a self-presentational or social desirability dimension such as (giving to charities) in the second study. Second explanation is that the presence of honesty might be not important to our participants’ self-concept in the third study. Third explanation is the conceptualization of moral duties. Donations to charity are a choice for some people as to whether and towards whom they want to fulfil it. In contrast, honesty is a negative moral duty that we owe to everybody (see Kant, 1785). It might be that moral identity has more influence when people have more personal choice or as to whether they implement a moral behaviour or

not. Johnston and Krettenauer (2011) assumed that moral identity served as mediator when predicting prosocial but not anti-social behaviour in adolescents.

Concerning cultural differences in moral judgment and moral behavior, dishonesty was not very common in both samples. No significant difference in deception, however, there was a slight tendency for Saudi participants to deceive more than UK participants. It might be, for example, that the payoff used was of a different value in Saudi Arabia and the UK. Similar to the results reported in Chapters 2 and 3, the endorsement of ingroup, authority, and purity moral foundations was higher among Saudi than UK participants. There was no difference in the endorsement of moral foundations related to harm and fairness.

#### **Fourth study**

In the interest of exploring the possible factors affecting moral behaviour, Study 4 examined the association between understanding moral violations and certain moral emotions. The main goal of Study 4 was to investigate the relationship between moral emotions (anger, disgust, sadness, apathy, guilt, contempt, shame, resentment, and embarrassment) and violations in the five moral foundations (harm, justice, ingroup, authority, and purity) in Saudi Arabia and the UK. In addition, this study investigated cross-cultural differences in linking certain emotions to moral foundation violations.

Previous studies, such as Rozin et al. (1999), Horberg et al. (2009) and Li et al. (2016) proposed exclusive relationships between moral emotions and violations in the moral foundations. Violations of harm and fairness foundations should trigger anger; violations of ingroup and authority foundations should trigger contempt; and violations of purity foundation should trigger

disgust. Part of our results are in line with these previous findings. As expected, violations of harm, and justice foundations triggered anger and violations of purity foundation triggered disgust. However, unlike previous studies, violations of authority foundation triggered anger and violations of ingroup foundation triggered sadness. A possible reason for the this unexpected result is that anger associated with actions that possibly developed from misunderstanding and considered the most easily cured emotion (Hutcherson & Gross, 2011). Another reason is that undergoing an immoral action can produce negative emotions such as, sadness and anger (Avramova & Inbar, 2013). Furthermore, one valid reason for the absence of this exclusive emotion-moral judgment relationship is that recent studies on moral judgment and emotions such as Cameron et al. (2013) and Feinberg et al. (2014) did not support this exclusive relationship.

Regarding the cross-cultural differences in the classification of moral violations, the results showed few cultural differences. As expected, few cultural differences were found in the assignments of the violations made by both samples. Despite the large agreement between Saudi and UK participants' classifications and the original classifications of the 40 violation by Graham et al. (2009), violations of the harm foundations were often classified as violations of purity by Saudi participants and vice versa. This result can be attributed to the cultural differences in the importance of the different five moral foundations. Another possible interpretation is that the moral foundations of harm and purity might share some definitional overlap in religious societies.

Participants in both samples regarded actions that Graham et al. (2009) considered as violations of ingroup, authority, and purity foundations as non-moral violations than violations of the harm and justice foundations. A question to be answered in future studies is whether participants regarded these actions as non-moral violations at all or whether they viewed them as violations

of social conventions as in Turiel theory (1983). Previous chapters mentioned that moral domain theory by Turiel (1983) distinguishes between a moral and a social conventional domain. Moral violations are considered wrong for everybody everywhere despite the institutional rules and arrangements while social-conventional violations depend on wider aspect of cultural and social organizations. Shweder et al. (1991) proposed that US adults largely distinguish between moral and social-conventional rules, while participants from India view most violations as moral violations.

Concerning cross-cultural differences in the relationship between moral emotions and moral foundation violations, the findings showed cultural differences between the two samples. In the Saudi sample, the harm and justice foundations triggered resentment, the ingroup foundation triggered sadness, resentment, and apathy, the authority foundation triggered resentment, and apathy, and the purity foundation triggered disgust. In the UK sample, the harm foundation triggered anger, the justice foundation triggered anger and disgust, the ingroup foundation triggered sadness, anger, and apathy, the authority foundation triggered anger, and apathy, and the purity foundation triggered disgust. The above findings contradict the study by Rozin et al. (1999) and Li et al. (2016) who reported no cultural differences in the link between moral emotions and moral violations. However, the findings for the UK participants are more in line with previous research by Rozin et al. (1999) and Li et al. (2016). Sadness is often related to the focus on the victim of a violation (e.g., Haidt, 2003). compared to anger, for example, sadness does not motivate an observer to approach a violator and punish a violation. It is possible that for the ingroup foundation, UK and Saudi participants focus on the victim of the violation while at the same time not acting on behalf of the victim. In that sense, sadness is considered “helpless” moral emotion that does not involve taking action on behalf of a victim.

One of the most common emotions assigned by Saudi participants in four of the five moral foundations was resentment. Resentment, anger, and contempt share many characteristics, but these emotions vary in the status of the violator (Haidt, 2003). Resentment is aimed at people with a perceived higher status, anger at people with equal status, contempt at people with lower status than the evaluator. The status differences between the participants and the violators were not tested in this study. However, it might be that Saudi participants' default assumption was that the violator was of higher status.

### **Where do we go from here?**

As with any empirical research, this thesis certainly has its limitations. First, the data in all studies were from unrepresentative sample as participants were recruited through the Universities' participant pools which mainly contains students in both samples. This might have affected the measures of moral judgment, moral identity, general values, and moral behaviour used in this thesis.

Second, some of the measures employed in this study were designed in western cultures and applied in western and non-western cultures due to the shortage of non-western population's measures. As discussed previously, applying western designed measures in non-western cultures could generate biased findings. For example, morality scales were developed in a Western-Christian culture and then applied in a Middle Eastern culture with participants having non-Christian beliefs.

Third, the current thesis employed experimental methods to collect data. Usually experiments are built on artificial settings that might not reflect the natural settings. For example, the amount of donations was giving by participants in the second study depends on the framing of the charity

organizations. Fourth, lack of prior studies on this topic in the Middle Eastern context made it hard to make assumptions regarding the study variables. On the other hand, studies on this topic in the western cultures directed us to make the studies expectations.

To overcome the aforementioned limitations moral and cross-cultural psychology could benefit from the following suggestions. Since we had mixed results in the relationship between moral judgment in the five moral foundations and moral behaviour in dictator game experiment, changing the experimental settings such as the type of donated charity and the framing of the charities would help in generalizing our results. For example, the framing of the charities used in study two was based on existing charities in the UK, and the goals of these charities might not be as common and influential in a Middle Eastern culture as in the UK. Replicating some of the experimental condition employed in honesty tasks (study 3) in western cultures might give clear vision on the association between moral judgment and dishonest behaviour. Future research on dishonest behaviour should focus on different experimental settings such as task types, payment style, and culture of the sample to explore the boundary conditions of dishonest behaviour in non-Western cultures. In general, more studies encompassing different ranges of moral identity measures and moral behaviour measures worth exploring in future research. To replicate and support the existing findings we need to employ different types of moral behaviours. In our study, different moral behaviours generated different results.

The current sets of studies mainly conceptualized potential cross-cultural differences between Saudi Arabia and the UK along the dimension of collectivism-individualism. While this dimension has received much research (but also increasing criticism, see Turiel, 2002) other ways of measuring differences between those two societies are possible. For example, throughout this thesis I referred to religiosity as potential explanatory variable, which could be

included in future research. Number of religiosity measures could be included in future study in addition to measures of values and moral behaviour. For example, the Duke Religiosity Index adopted from the work of Koenig, Meador, and Parkerson (1997) that measures the three main elements of religiousness. The three subscales are Organizational such as frequency of religious activities, Non Organizational such as time spent in private religious activities, and Intrinsic Religiosity. Another source of religious measure is Saucier's (2004) work. Saucer (2004) differentiates between Tradition-oriented Religiousness (TR) and Subjective Spirituality (SS).

The overall goal of this thesis was to investigate moral functioning in a society that has traditionally received very little research on this topic, namely Saudi Arabia. At the same time, this thesis provided the opportunity to examine moral foundation theory and its relation to other morally relevant variables, like moral identity, moral behaviour, and moral emotions in greater depth than has been done in past research. My empirical research supported some of the tenets of moral foundation theory, specifically the cross-cultural difference in the endorsement of the five moral foundations. At the same time, people's moral judgment was rarely solely predictive of moral behaviour, in line with theories that emphasize the role of moral identity or personal moral values (e.g., Blasi, 2004). Furthermore, the relationship between emotions and moral violations is not as exclusive as Cameron et al. (2013) and Feinberg et al. (2014) assumed. More research is required on moral foundation theory specifically in the Middle East region. This will help in understanding the cross-cultural similarities and differences in moral domain and its underlying processes.



## Appendices

Participants consent form, debrief, and questionnaires for study 1.

A.1 Consent form.

### *The impact of culture values and personality traits on social behaviour*

*Participants must be 18 years or older. They must be either residents of the United Kingdom or Saudi Arabia.*

*Principal Investigator:* Azizah alqahtani, [azizah.alqahtani@plymouth.ac.uk](mailto:azizah.alqahtani@plymouth.ac.uk)

*Supervisor:* Dr. Michaela Gummerum, [michaela.gummerum@plymouth.ac.uk](mailto:michaela.gummerum@plymouth.ac.uk)

***Purpose of the Study:*** Understanding the relationship between cultural values and personality traits, and exploring the impact of culture values and personality traits on social behaviour, such as moral behaviour.

### ***Description of the Study:***

People who are 18 years or older and residents of the United Kingdom or Saudi Arabia are the target participants of this study. We expect 150 participants from each culture to take part in the study. You will be asked to read a consent form and give your consent (3 minutes), answer some demographic questions (3 minutes), and complete four questionnaires regarding personality traits, cultural values, and social behaviour (25 minutes).

This research conforms to each clause of Plymouth University's Principles for Research Involving Human Participants and has been approved by the Plymouth University's Health and Human Sciences Ethics Committee.

***Risks and Discomforts:*** There are no risks in taking part in this study. You will be giving us your time, which some may see as a disadvantage.

***Benefits of the Study:*** Participants will be paid in order to fill in the questionnaire at the end.

***Confidentiality:*** All information collected during this study will be anonymous because no identifying information (e.g., participants' name) will be collected. The data from this study will

be stored on a password protected computer to which only the investigators will have access. Complete data from each participant will be kept for 10 years after which it will be destroyed.

***Voluntary Nature of Participation:*** Participation in this study is voluntary. If you decide to participate, you are free to withdraw your consent and to stop your participation at any time without penalty. If you wish to stop your participation or withdraw from the study, simply exit the survey at any time. Withdrawing at any point from the survey will result in an automatic removal and deletion of your data. Data from participants who indicate at the end of the survey that they do not consent to have their responses included will also be deleted and not included in analyses.

***Questions:*** If you have any questions about the research please contact the researchers. Their information is available at the top of this form.

If you having any questions regarding your rights as a research participant in this study, you may contact the Plymouth University Faculty of Health and Human Sciences Human Ethics Committee; Ms Sarah Jones, [sarah.c.jones@plymouth.ac.uk](mailto:sarah.c.jones@plymouth.ac.uk)

***Agreement:*** Clicking the “I consent to participate in this research” indicates that you have read the information in this agreement and have had a chance to ask any questions you have about the study (by emailing the researcher). Your consent also indicates that you agree to be in the study and have been told that you can change your mind and withdraw your consent to participate at any time. If you wish to keep a copy of this agreement, please save or print this page.

By clicking “I consent” you are not giving up any of your legal rights.

## A.2 Debrief.

### The impact of culture values and personality traits on social behaviour

Thank you very much for participating in this study.

Now we would like to inform you in more detail about the study.

In this study we are interested in how people’s personality traits and their cultural values are related, and how both predict their moral preferences. Previous research shows that personality traits and cultural values are related in a certain way (e.g., extravert people value creativity and self-direction), but the relationship between personality and values has rarely been studied in a cross-cultural comparison. Similarly, we want to know whether people with a particular personality type and those who endorse certain cultural values prefer different types of moral behaviour.

To that end we asked people from the United Kingdom and Saudi Arabia to participate in this study. You were presented with a questionnaire that measures basic personality dimensions (e.g., extraversion, introversion, conscientiousness), and a questionnaire that measured cultural values, such as respect for tradition, benevolence, autonomy. We also asked you to rate the appropriateness of certain moral actions. Finally, we asked you to which degree you endorse cultural orientations of individualism (e.g., believing in personal preferences and autonomy) or collectivism (e.g., endorsing group preferences).

If you have any questions concerning this research please contact the principle investigator, Azizah Alqahtani, [azizah.alqahtani@plymouth.ac.uk](mailto:azizah.alqahtani@plymouth.ac.uk). We would also like to remind you that you have the right to withdraw from the study even after you completed it. To do so, please email the principle investigator with your Personal ID code after which all data associated with this ID code will be deleted.

If you are dissatisfied with the way the research is conducted, please contact the principal investigator in the first instance. If you feel the problem has not been resolved please contact the secretary to the Faculty of Health and Human Sciences Ethics Committee, Ms Sarah Jones, [sarah.c.jones@plymouth.ac.uk](mailto:sarah.c.jones@plymouth.ac.uk).

Thank you again for your participation and have a nice day.

### A.3 Questionnaires of study 1.

Age:	Marital status:	Nationality:
Gender:	Occupation:	
Education:	Place of living:	

### NEO FIVE-FACTOR INVENTORY BY: Costa & McCrae (1992)

Carefully read all of the instructions before beginning. This questionnaire contains 60 statements. Read each statement carefully. For each statement tick the box with the response that best represents your opinion. Make sure that your answer is in the correct box.

Tick **Strongly Disagree** if you strongly disagree or the statement is definitely false.

Tick **Disagree** if you disagree or the statement is mostly false.

Tick **Neutral** if you are neutral on the statement, you cannot decide, or the statement is about equally true and false.

Tick **Agree** if you agree or the statement is mostly true.

Tick **Strongly Agree** if you strongly agree or the statement is definitely true.

	<b>Strongly disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly Agree</b>
I am not a worrier.					
I like to have a lot of people around me.					
I don't like to waste my time daydreaming.					
I try to be courteous to everyone I meet.					
I keep my belongings clean and neat.					
I often feel inferior.					
I laugh easily.					
Once I find the right way to do something, I stick to it.					
I often get into arguments with my family and co-workers.					
I'm pretty good about pacing myself so as to get things done on time.					
When I'm under a great deal of stress, sometimes I feel like I'm going to pieces.					
I don't consider myself especially 'light hearted'					
I am intrigued by the pattern I find in art and nature.					
Some people think I'm selfish and egotistical.					
I am not a very methodical person.					
I rarely feel lonely or blue.					
I really enjoy talking to people.					
I believe letting students hear controversial speakers can only confuse and mislead them.					
I would rather cooperate with others than compete with them.					
I try to perform all the tasks assigned to me conscientiously.					
I often feel tense and jittery.					
I like to be where the action is.					
Poetry has little or no effect on me.					
I tend to be cynical and skeptical of others' intentions.					
I have a clear set of goals and work toward them in an orderly fashion.					
Sometimes I feel completely worthless.					
I usually prefer to do things alone.					
I often try new and foreign foods.					
I believe that most people will take advantage of you if you let them.					
I waste a lot of time before settling down to work.					
I rarely feel fearful or anxious.					
I often feel as if I'm bursting with energy.					
I seldom notice the mood or feelings that different environment produce.					
Most people I know like me.					
I work hard to accomplish my goals.					

I often get the energy at the way people treat me.					
I am a cheerful, high-spirited person.					
I believe we should look to our religious authorities for decisions on moral issues.					
Some people think of me as cold and calculating.					
When I make a commitment, I can always be counted on to follow through.					
Too often, when things go wrong, I get discouraged and feel like giving up.					
I am not a cheerful optimist.					
Sometime when I am reading poetry or looking at a work of art, I feel a chill or wave of excitement.					
I'm hard-headed and tough-minded in my attitude.					
Sometimes I'm not as dependable or reliable as I should be.					
I am seldom sad or depressed.					
is My life fast-paced.					
I have little interest in speculating on the nature of the universe or the human condition.					
I generally try to be thoughtful and considerate.					
I am productive person who always gets the job done.					
I often feel helpless and want someone else to solve my problems.					
I am a very active person.					
I have a lot of intellectual curiosity.					
If I don't like people, I let them know.					
I never seem to be able to get organized.					
At times I have been so ashamed I just wanted to hide.					
I would rather go my own way than be a leader of others.					
I often enjoy playing with theories or abstract ideas.					
If necessary, I am willing to manipulate people to get what I want.					
I strive for excellence in everything I do.					

### Portrait Values Questionnaire (PVQ)

By: Schwartz (2001)

Here we briefly describe some people. Please read each description and think about how much each person is or is not like you. Put an X in the box to the right that shows how much the person in the description like you.

**HOW MUCH LIKE YOU IS THIS PERSON?**

	Very much like me	like me	some- what like me	a little like me	not like me	not like me at all
1. Thinking up new ideas and being creative is important to him. He likes to do things in his own original way.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. It is important to him to be rich. He wants to have a lot of money and expensive things.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. He thinks it is important that every person in the world be treated equally. He believes everyone should have equal opportunities in life.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. It's very important to him to show his abilities. He wants people to admire what he does.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. It is important to him to live in secure surroundings. He avoids anything that might endanger his safety.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. He thinks it is important to do lots of different things in life. He always looks for new things to try.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. He believes that people should do what they're told. He thinks people should follow rules at all times, even when no-one is watching.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. It is important to him to listen to people who are different from him. Even when he disagrees with them, he still wants to understand them.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. He thinks it's important <b>not</b> to ask for more than what you have. He believes that people should be satisfied with what they have.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. He seeks every chance he can to have fun. It is important to him to do things that give him pleasure.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. It is important to him to make his own decisions about what he does. He likes to be free to plan and to choose his activities for himself.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. It's very important to him to help the people around him. He wants to care for their well-being.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Being very successful is important to him. He likes to impress other people.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. It is very important to him that his country be safe. He thinks the state must be on watch against threats from within and without.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. He likes to take risks. He is always looking for adventures.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. It is important to him always to behave properly. He wants to avoid doing anything people would say is wrong.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. It is important to him to be in charge and tell others what to do. He wants people to do what he says.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. It is important to him to be loyal to his friends. He wants to devote himself to people close to him.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## HOW MUCH LIKE YOU IS THIS PERSON?

	Very much like me	like me	some- what like me	a little like me	not like me	not like me at all
19. He strongly believes that people should care for nature. Looking after the environment is important to him.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. Religious belief is important to him. He tries hard to do what his religion requires.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. It is important to him that things be organized and clean. He really does <b>not</b> like things to be a mess.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. He thinks it's important to be interested in things. He likes to be curious and to try to understand all sorts of things.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. He believes all the worlds' people should live in harmony. Promoting peace among all groups in the world is important to him.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. He thinks it is important to be ambitious. He wants to show how capable he is.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. He thinks it is best to do things in traditional ways. It is important to him to keep up the customs he has learned.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26. Enjoying life's pleasures is important to him. He likes to 'spoil' himself.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27. It is important to him to respond to the needs of others. He tries to support those he knows.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28. He believes he should always show respect to his parents and to older people. It is important to him to be obedient.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29. He wants everyone to be treated justly, even people he doesn't know. It is important to him to protect the weak in society.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30. He likes surprises. It is important to him to have an exciting life.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31. He tries hard to avoid getting sick. Staying healthy is very important to him.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32. Getting ahead in life is important to him. He strives to do better than others.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33. Forgiving people who have hurt him is important to him. He tries to see what is good in them and not to hold a grudge.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34. It is important to him to be independent. He likes to rely on himself.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35. Having a stable government is important to him. He is concerned that the social order be protected.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36. It is important to him to be polite to other people all the time. He tries never to disturb or irritate others.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37. He really wants to enjoy life. Having a good time is very important to him.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### HOW MUCH LIKE YOU IS THIS PERSON?

	Very much like me	like me	some- what like me	a little like me	not like me	not like me at all
38. It is important to him to be humble and modest. He tries not to draw attention to himself.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
39. He always wants to be the one who makes the decisions. He likes to be the leader.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
40. It is important to him to adapt to nature and to fit into it. He believes that people should not change nature.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Moral Foundations Questionnaire  
By: Graham, Haidt, and Nosek (2008)

Part 1. When you decide whether something is right or wrong, to what extent are the following considerations relevant to your thinking? Please rate each statement using this scale:

[0] = not at all relevant (This consideration has nothing to do with my judgments of right and wrong)

[1] = not very relevant

[2] = slightly relevant

[3] = somewhat relevant

[4] = very relevant

[5] = extremely relevant (This is one of the most important factors when I judge right and wrong)

**When you decide whether something is right or wrong, to what extent are the following considerations relevant to your thinking?**

		Not at all relevant	Not very relevant	Slightly relevant	Somewhat relevant	Very relevant	Extremely relevant
1	Whether or not someone suffered emotionally	0	1	2	3	4	5
2	Whether or not some people were treated differently than others	0	1	2	3	4	5
3	Whether or not someone's action showed love for his or her country	0	1	2	3	4	5
4	Whether or not	0	1	2	3	4	5



	someone showed a lack of respect for authority						
5	Whether or not someone violated standards of purity and decency	0	1	2	3	4	5
6	Whether or not someone was good at math	0	1	2	3	4	5
7	Whether or not someone cared for someone weak or vulnerable	0	1	2	3	4	5
8	Whether or not someone acted unfairly	0	1	2	3	4	5
9	Whether or not someone did something to betray his or her group	0	1	2	3	4	5
10	Whether or not someone conformed to the traditions of society	0	1	2	3	4	5
11	Whether or not someone did something disgusting	0	1	2	3	4	5
12	Whether or not someone was cruel	0	1	2	3	4	5
13	Whether or not someone was denied his or her rights	0	1	2	3	4	5
14	Whether or not someone showed a lack of loyalty	0	1	2	3	4	5
15	Whether or not an action caused chaos or disorder	0	1	2	3	4	5
16	Whether or not someone acted in a way that God would approve of	0	1	2	3	4	5

Part 2. Please read the following sentences and indicate your agreement or disagreement:

		<b>Strongly disagree</b>	<b>Moderately disagree</b>	<b>Slightly disagree</b>	<b>Slightly agree</b>	<b>Moderately agree</b>	<b>Strongly agree</b>
1	Compassion for those who are suffering is the most crucial virtue.	0	1	2	3	4	5
2	When the government makes laws, the number one principle should be ensuring that everyone is treated fairly.	0	1	2	3	4	5
3	I am proud of my country's history.	0	1	2	3	4	5
4	Respect for authority is something all children need to learn.	0	1	2	3	4	5
5	People should not do things that are disgusting, even if no one is harmed.	0	1	2	3	4	5
6	It is better to do good than to do bad.	0	1	2	3	4	5
7	One of the worst things a person could do is hurt a defenseless animal.	0	1	2	3	4	5
8	Justice is the most important requirement for a society.	0	1	2	3	4	5
9	People should be loyal to their family members, even when they have done something	0	1	2	3	4	5

	wrong.						
10	Men and women each have different roles to play in society.	0	1	2	3	4	5
11	I would call some acts wrong on the grounds that they are unnatural.	0	1	2	3	4	5
12	It can never be right to kill a human being.	0	1	2	3	4	5
13	I think it's morally wrong that rich children inherit a lot of money while poor children inherit nothing.	0	1	2	3	4	5
14	It is more important to be a team player than to express oneself.	0	1	2	3	4	5
15	If I were a soldier and disagreed with my commanding officer's orders, I would obey anyway because that is my duty.	0	1	2	3	4	5
16	Chastity is an important and valuable virtue.	0	1	2	3	4	5

Culture orientation scale (Individualism and collectivism scale)

By: Triandis and Gelfland (1998)

**Please read through the following list of statements. Please circle the response that best represents your opinion.**

	<b>Never</b>				<b>Some- times</b>				<b>Always</b>
	1	2	3	4	5	6	7	8	9

1. I'd rather depend on myself than others.									
2. It is my duty to take care of my family, even when I have to sacrifice what I want									
3. To me, pleasure is spending time with others.									
4. It is important to me that I respect the decisions made by my groups.									
5. I feel good when I cooperate with others.									
6. I rely on myself most of the time; I rarely rely on others									
7. The well-being of my co-workers is important to me									
8. My personal identity, independent of others, is very important to me									
9. Competition is the law of nature.									
10. If a co-workers gets a prize, I would feel proud.									
11. Winning is everything.									
12. Family members should stick together, no matter what sacrifices are required									
13. Parents and children must stay together as much as possible.									
14. When another person does better than I do, I get tense and aroused.									
15. I often do "my own thing"									

16. It is important that I do my job better than others.									
--	--	--	--	--	--	--	--	--	--

Participants consent form, debrief, DG task, and questionnaires for study 2.

B.1 Consent form.

**UNIVERSITY OF PLYMOUTH**  
**FACULTY OF HEALTH AND HUMAN SCIENCES**  
**Human Ethics Committee Consent Form**

CONSENT TO PARTICIPATE IN RESEARCH PROJECT

Azizah Alqahtani, [azizah.alqahtani@plymouth.ac.uk](mailto:azizah.alqahtani@plymouth.ac.uk)

Michaela Gummerum, [michaela.gummerum@plymouth.ac.uk](mailto:michaela.gummerum@plymouth.ac.uk)

**Resource allocation and values**

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**What is the study about?**

This study examines how people allocate resources between themselves and others, and whether resource allocation is based on people's personal and cultural values. We plan to conduct this study in both the UK and Saudi Arabia to be able to compare resource allocations and values across cultures.

**Why am I being approached?**

You have been approached to participate in this study, because you signed up for the School of Psychology Participant Pool.

**What will happen during the study?**

You will be asked to complete four questionnaires and one resource allocation task. In addition, you will be asked to provide your date of birth and gender. The questionnaires will measure your personal and cultural values.

In the resource allocation task, you will be presented with six different recipients, either individuals or organizations. These recipients are anonymous to you (and you to them). You will be given £10 to allocate between yourself and the recipients. You will be paid the money you allocate to yourself in the resource allocation task, in addition to the payment you will receive for participating in this study (£4 per 30 mins).

This study will take no longer than 30 minutes.

**Do I have to take part?**

Your participation is completely voluntary. There are no known risks for the participants of this study.

**Can I withdraw?**

You can withdraw at any time without any penalty.

**Will it affect my relationship with the University?**

If you are a student at Plymouth University, this research is separate from any assessments. Research participation and performance does not relate to any of your assessments. You can withdraw at any time, without affecting your relationship with the University.

**Is the information collected confidential?**

All information obtained in this study will be kept strictly confidential. All answers will be recorded on a computer. Only the investigator will have access to this data. All data will be destroyed ten years after publication of the results of this study.

**Will I be identifiable in any way?**

All participants will create a personal identification number. All decisions and answers in the questionnaire can be traced only to this personal identification number and not to the participant.

**Who can I contact for further information?**

If you have any questions about this study, please do not hesitate to contact us at the e-mail listed above.

If you are dissatisfied with the way the research is conducted, please contact the principal investigator in the first instance: 07487659602. If you feel the problem has not been resolved please contact the secretary to the Faculty of Health and Human Sciences Ethics Committee: Ms Sarah Jones 01752 585339.

I have read and understood the information about the research
I have had the chance to find out more about the study if I wished to.
I know what my part will be in the study and I know how long it will take.
I have been told if there are any possible risks.
I understand that personal information is strictly confidential
I freely consent to be a participant in the study. No one has put pressure on me.
I know that I can stop taking part in the study at any time.
Refusal to take part will make no difference to my university studies.
I know that if there are any problems I can contact the researchers listed above.

Under these circumstances, I agree to participate in the research.

Name: .....

Signature: .....

Date: .....

## B.2 Debriefing.

Thank you very much for participating in this study.

Now I would like to inform you in more detail about the study.

In this study we are interested in how people allocate resources to themselves and anonymous others, both individuals and organizations, and how people's resource allocations are affected by the values. We also plan to conduct this study in the UK and Saudi Arabia to be able to compare responses.

You completed four different questionnaires. These questionnaires measured (1) your moral values, (2) your general values, (3) your personal values, and (4) your cultural values. We are interested in how these values are related to your responses in the resource allocation task.

In the resource allocation task, you were presented either with an anonymous individual or five different charitable organizations. We are interested in how you allocated resources to this individual and organizations, and whether you treated some of these organizations differently to others. Moreover, we are interested in the relationship between your values and resource allocation. For example, we want to know, whether people, who regard the value of "benevolence" or "helping others" as important, also allocate more resources to the recipients.

I want to remind you that you have the right to withdraw from the study at any time during and after the study and the data will be destroyed and will not be used for analysis.

If you have any questions please feel free to ask the experimenter now.

In case you have any questions at a later point in time please feel free to contact the experimenter.

If you are dissatisfied with the way the research is conducted, please contact the principal investigator in the first instance: 07487659602. If you feel the problem has not been resolved please contact the secretary to the Faculty of Health and Human Sciences Ethics Committee: Mrs Sarah Jones 01752 585 339.

Thank you again for your participation and have a nice day.

Azizah Alqahtani, [azizah.alqahtani@plymouth.ac.uk](mailto:azizah.alqahtani@plymouth.ac.uk)

Michaela Gummerum, [michaela.gummerum@plymouth.ac.uk](mailto:michaela.gummerum@plymouth.ac.uk)

### B.3 DG task.

#### **DG verbal instructions**

You will now engage in a number of tasks. In these tasks, you will make a decision on how to allocate money between yourself or another person or organization.

In each one of those allocation tasks, you and the other person or organization are given £10. You can decide on how to divide these £10 between yourself and the other person or organization. You can divide these £10 in steps of £1. The other person/organization cannot decide anything. They can just accept what you give them.

Let me give you an example. Let's say you decided to give 7 out of the £10 to the other person or organization.

How many pounds do you have left? (*correct answer: £3 = 10-7*)

How many pounds would the person/organization have? (*correct answer: £7*).

Altogether you will make 6 such decisions with another person or organization. Your decisions are about real money. Out of the 6 decisions you make, we will randomly pick one. The decision you make in this task will be used to allocate real money between you and the other person/organization.

So, for example, if we pick the decision, in which you allocated £7 out of £10 to the other person or organization, these £7 will go to the person/organization. You yourself will then receive £3.

Do you have any questions?

In this task **you are the Proposer.**

**Question: How much of the £2 do you want to give to the Responder?**

**You give:**

**The Responder gets**

**So, you keep:**

The responder will be informed about your decision.



## DG neutral

**Please write your personal identification code:**

In this task you can divide £10 between yourself and another person. This person is anonymous. This means that the other person does not know who you are, and you do not know who this person is.

Please divide the £10 in steps of £1 (0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10)

**Question: How many of the £10 do you want to give to the other person?**

**The other person gets**

**So, you keep:**

The other person will be informed about your decision.

## DG harm

### Please write your personal identification code:

In this task you can divide £10 between yourself and Organization H. Here is a short description of Organization H:

“Organization H supports families who have a child aged 0-18 years of age with a life threatening or terminal illness and who need the bespoke need the organization offers. Many of these families have to face the very real possibility that their child may die and struggle to cope on a day-to-day basis. Organization H supports these families who have children with a life threatening or terminal illness and are in the greatest need. Organization H’s support workers provide a life line to these families and children. Organization H supports the whole family including parents, carers, the unwell child, brothers, sisters and grandparents. The Organization brings support and help to families who so desperately need it at home, in hospital and in the community. Any family can receive support from the moment of their child or young person’s diagnosis. Organization H’s support varies widely, but includes such things as home and school support, support specifically for siblings, or bereavement support.”

**Question: How would you like to divide the £10 between yourself and Organization I?**

**Organization I gets**

**So, you keep:**

## DG Justice

### Please write your personal identification code:

In this task you can divide £10 between yourself and Organization J. Here is a short description of Organization J:

“Organization J aims to provide the advice people need for the problems they face and improve the policies and practices that affect people’s lives. Organization J provides free, independent, confidential and impartial advice to everyone on their rights and responsibilities. Organization J has helped thousands of people to resolve their legal, money, and a variety of other issues every year. With Organization J in the community you have somewhere to turn to when you need help – 4 in 10 people have used Organization J at some point in their lives.

Organization J operates under four basic principles. Their service is:

**Free:** It won’t cost anything. If Organization J cannot help, they will point you in the right direction.

**Impartial:** Organization J is there for you, but doesn’t have a particular point of view.

**Independent:** Organization J is not part of the government.

**Confidential:** Organization J will not tell anyone else about your problem.”

**Question: How would you like to divide the £10 between yourself and Organization J?**

**Organization J gets**

**So, you keep:**

## **DG ingroup**

### **Please write your personal identification code:**

In this task you can divide £10 between yourself and Organization I. Here is a short description of Organization I:

“Organization I aims to organize and represent the interests of local people from all backgrounds and locations. Organization I envisions to both preserve the traditional local values and to promote a thriving local community and economy. Organization I wants to sustainably manage the local environment and make sure that all local people can enjoy it. It wants all people in the local community to have equal access to facilities and services. Organization I wants all local people to pursue their businesses and activities and to live in a society that appreciates, values, and understand the local way of life.

Organization I aims to help adults and children to make the most of the benefits of being involved in local communities. Introducing people to their local community can inspire them to become passionate about their community’s issues and values. Organization I provides and supports a broad portfolio of educational resources, community projects, and local research initiatives that should help all people in the local community.”

**Question: How would you like to divide the £10 between yourself and Organization I?**

**Organization I gets**

**So, you keep:**

## **DG authority**

### **Please write your personal identification code:**

In this task you can divide £10 between yourself and Organization A. Here is a short description of Organization A:

“Organization A aims to combat violence and crime in our cities, towns, and public transport. Organization A trains its members to make citizen’s arrests for violent crimes. Members of organization A patrol the streets and neighbourhoods but also provide education programs and workshops for schools and businesses. Volunteer members of Organization A walk in the streets or ride public transport. They have to wear Organization A’s uniforms to represent the organization. Volunteer members of Organization A must not have a recent or serious criminal record. Members are trained in first aid, law, conflict resolution, communication, and basic martial arts. If their own or other citizen’s lives are in danger, members of Organization A are allowed to do whatever is lawful and necessary.”

**Question: How would you like to divide the £10 between yourself and Organization A?**

**Organization A gets**

**So, you keep:**

## **DG purity**

### **Please write your personal identification code:**

In this task you can divide £10 between yourself and Organization P. Here is a short description of Organization P:

“Organization P aims to create a culture of love and relationships. Through community-wide outreach events, Organization P tries to challenge and defy the meet-up, hook-up, break-up relationship culture of today and to inspire people to live a life centred on meaningful relationships.

Organization P is about standards they are the benchmarks according to which people are supposed to live. Standards define what is acceptable. Organization P wants to encourage people to be ambitious and challenge themselves to lead a life of humility and courageous integrity.

Organization P wants to challenge the contemporary culture of low expectations and calls a new generations to set new relationship standards and to replace self-indulgence with self-control. No complacency, no mediocrity.”

**Question: How would you like to divide the £10 between yourself and Organization P?**

**Organization P gets**

**So, you keep:**

#### B.4 Questionnaires of study 2.

Age:

Nationality:

Gender:

Moral Judgment: **Moral Foundations Questionnaire (Graham et al., 2009, 2011)**

**Please read the following sentences and indicate your agreement or disagreement:**

		<b>Strongly disagree</b>	<b>Moderately disagree</b>	<b>Slightly disagree</b>	<b>Slightly agree</b>	<b>Moderately agree</b>	<b>Strongly agree</b>
1	Compassion for those who are suffering is the most crucial virtue.	0	1	2	3	4	5
2	When the government makes laws, the number one principle should be ensuring that everyone is treated fairly.	0	1	2	3	4	5
3	I am proud of my country's history.	0	1	2	3	4	5
4	Respect for authority is something all children need to learn.	0	1	2	3	4	5
5	People should not do things that are disgusting, even if no one is harmed.	0	1	2	3	4	5
6	It is better to do good than to do bad.	0	1	2	3	4	5
7	One of the worst things a person could do is hurt a defenseless animal.	0	1	2	3	4	5
8	Justice is the most important requirement for a society.	0	1	2	3	4	5
9	People should be loyal to their	0	1	2	3	4	5

	family members, even when they have done something wrong.						
10	Men and women each have different roles to play in society.	0	1	2	3	4	5
11	I would call some acts wrong on the grounds that they are unnatural.	0	1	2	3	4	5
12	It can never be right to kill a human being.	0	1	2	3	4	5
13	I think it's morally wrong that rich children inherit a lot of money while poor children inherit nothing.	0	1	2	3	4	5
14	It is more important to be a team player than to express oneself.	0	1	2	3	4	5
15	If I were a soldier and disagreed with my commanding officer's orders, I would obey anyway because that is my duty.	0	1	2	3	4	5
16	Chastity is an important and valuable virtue.	0	1	2	3	4	5

### General values : Value Survey 14-Bipol-Value Questionnaire (Strack et al., 2008)

Instructions: The following 14 value pairs are not necessarily opposites; they may express complementary tendencies under some circumstances. Please indicate your own personal values. Rating a value with an answer of „2“ indicates „clearly more important than the other value“, an answer of „1“ indicates „tends to be preferred over the other“ and „0“ indicates equal weight for both values. Please make only one mark in each row.

EQUALITY

2 1 0 1 2

AUTHORITY

(equal opportunity for all)

(the right to lead or command)



SOCIAL POWER	2 1 0 1 2	SOCIAL JUSTICE
(control over others, dominance)		(correcting injustices, care for the weak)
SOCIAL ORDER	2 1 0 1 2	EXCITING LIFE
(stability of society)		(stimulating experiences)
WEALTH	2 1 0 1 2	UNITY WITH NATURE
(material possessions, money)		(fitting into nature)
POLITENESS	2 1 0 1 2	CREATIVITY
(courtesy, good manners)		(uniqueness, imagination)
ENJOYING LIFE	2 1 0 1 2	A WORLD AT PEACE
(fulfilment of wishes)		(free of war and conflict)
BROAD-MINDED	2 1 0 1 2	PRESERVING PUBLIC IMAGE
(tolerant of different ideas and beliefs)		(protecting face)
HUMBLE	2 1 0 1 2	INFLUENTIAL
(modest, self-effacing)		(having an impact on people and events)
HONEST	2 1 0 1 2	SUCCESSFUL
(genuine, sincere)		(achieving goals)
ENJOYING LIFE	2 1 0 1 2	DEVOUT
(enjoying food, sex, leisure, etc.)		(holding to religious faith and belief)
RESPECT FOR TRADITION	2 1 0 1 2	A VARIED LIFE
(preservation of time-honoured customs)		(filled with challenge, novelty, and change)
DARING	2 1 0 1 2	OBEDIENT
(seeking adventure, risk)		(dutiful, meeting obligations)

CHOOSING OWN GOALS	2	1	0	1	2	HONORING OF PARENTS AND ELDERS
(selecting own purposes)						(showing respect)

OPENNESS	2	1	0	1	2	CONTROL OVER UNCERTAINTY
(cosmopolitan orientation, advocate of diversity)						(control over events and their development)

**Personal values: Good Self-Assessment (Barriga et al., 2001):**  
The Good-Self Assessment

Barriga et al., (2001)

Each question describes a quality or characteristic that a person might have. Each quality is described with two words. Such as **smart** or **intelligent**, and **friendly** or **neighbourly**. We would like to know how much each of these qualities describes *yourself* and the *kind of person* you are. For example, if a quality listed is a really central or important part of you without which you would not be you, then you would answer “**extremely important to me**”. If a quality listed seems like a nice or good quality, but it isn’t a central or important part of you, then you would answer “**not important to me**”. Please try to use a variety of different answers to show us which qualities are **extremely important to you**, which are **very important to you**, which are **a little important to you**, and which are **not important to you**.

How important is it to you that you are creative or imaginative?

Extremely	very	a little	not
Important	important	important	important
to me	to me	to me	to me

How important is it to you that you are considerate or courteous?

Extremely	very	a little	not
Important	important	important	important
to me	to me	to me	to me

How important is it to you that you are hard-working or industrious?

Extremely	very	a little	not
Important	important	important	important
to me	to me	to me	to me

How important is it to you that you are honest or truthful?

Extremely	very	a little	not
Important	important	important	important
to me	to me	to me	to me

How important is it to you that you are outgoing or sociable?

Extremely	very	a little	not
Important	important	important	important
to me	to me	to me	to me

How important is it to you that you are kind or helpful?

Extremely	very	a little	not
Important	important	important	important
to me	to me	to me	to me

How important is it to you that you are athletic or agile?

Extremely	very	a little	not
Important	important	important	important
to me	to me	to me	to me

How important is it to you that you are understanding or sympathetic?

Extremely	very	a little	not
Important	important	important	important
to me	to me	to me	to me

How important is it to you that you are funny or humorous?

Extremely	very	a little	not
Important	important	important	important
to me	to me	to me	to me

How important is it to you that you are generous or giving?

Extremely	very	a little	not
Important	important	important	important
to me	to me	to me	to me

How important is it to you that you are logical or rational?

Extremely	very	a little	not
Important	important	important	important
to me	to me	to me	to me

How important is it to you that you are sincere or genuine?

Extremely	very	a little	not
Important	important	important	important
to me	to me	to me	to me

How important is it to you that you are independent or self-reliant?

Extremely	very	a little	not
Important	important	important	important
to me	to me	to me	to me

How important is it to you that you are fair or just?

Extremely	very	a little	not
-----------	------	----------	-----

Important      important      important      important  
to me          to me          to me          to me

How important is it to you that you are active or energetic?

Extremely      very          a little      not  
Important      important      important      important  
to me          to me          to me          to me

How important is it to you that you are responsible or dependable?

Extremely      very          a little      not  
Important      important      important      important  
to me          to me          to me          to me

### Horizontal and Vertical Individualism and Collectivism Scale (Triandis & Gelfand, 1998)

Please read through the following list of statements. Please circle the response that best represents your opinion.

	Never				Some- times				Always
	1	2	3	4	5	6	7	8	9
1. I'd rather depend on myself than others.									
2. It is my duty to take care of my family, even when I have to sacrifice what I want									
3. To me, pleasure is spending time with others.									
4. It is important to me that I respect the decisions made by my groups.									
5. I feel good when I cooperate with others.									
6. I rely on myself most of the time; I rarely rely on others									
7. The well-being of my co-workers is important to me									
8. My personal identity, independent of others, is very important to me									
9. Competition is the law of nature.									

10. If a co-worker gets a prize, I would feel proud.									
11. Winning is everything.									
12. Family members should stick together, no matter what sacrifices are required									
13. Parents and children must stay together as much as possible.									
14. When another person does better than I do, I get tense and aroused.									
15. I often do “my own thing”									
16. It is important that I do my job better than others.									

Participants consent form, debrief, honesty task, and questionnaires for study 3.

C.1 participants consent form

## UNIVERSITY OF PLYMOUTH

### FACULTY OF HEALTH AND HUMAN SCIENCES

#### Human Ethics Committee Consent Form

#### CONSENT TO PARTICIPATE IN RESEARCH PROJECT

Azizah Alqahtani, [azizah.alqahtani@plymouth.ac.uk](mailto:azizah.alqahtani@plymouth.ac.uk)

Michaela Gummerum, [michaela.gummerum@plymouth.ac.uk](mailto:michaela.gummerum@plymouth.ac.uk)

#### Finding creative solutions and values

---

##### What is the study about?

This study examines whether and how people find creative solutions in a drawing and a verbal task, and how finding creative solutions is related to personal and cultural values. We plan to conduct this study in both the UK and Saudi Arabia to be able to compare responses across cultures.

##### Why am I being approached?

You have been approached to participate in this study, because you signed up for the School of Psychology Participant Pool.

##### What will happen during the study?

You will be asked to complete four questionnaires and two creative solutions tasks. In addition, you will be asked to provide your date of birth and gender. The questionnaires will measure your personal and cultural values.

You will engage in two creative solutions tasks. In the first task, you will be asked to re-create shapes without lifting your pen off a piece of paper. In the second task, you will be asked to find novel uses for every-day objects. Both of these tasks are timed.

In addition to the payment you will receive for participating in this study (£2 per 15 minutes) you will be able to get additional money based on your performance in the drawing task (up to a maximum of £4).

This study will take no longer than 45 minutes.

### **Do I have to take part?**

Your participation is completely voluntary. There are no known risks for the participants of this study.

### **Can I withdraw?**

You can withdraw at any time without any penalty.

### **Will it affect my relationship with the University?**

If you are a student at Plymouth University, this research is separate from any assessments. Research participation and performance does not relate to any of your assessments. You can withdraw at any time, without affecting your relationship with the University.

### **Is the information collected confidential?**

All information obtained in this study will be kept strictly confidential. All answers will be recorded on a computer. Only the investigator will have access to this data. All data will be destroyed ten years after publication of the results of this study.

### **Will I be identifiable in any way?**

All participants will create a personal identification number. All decisions and answers in the questionnaire can be traced only to this personal identification number and not to the participant.

### **Who can I contact for further information?**

If you have any questions about this study, please do not hesitate to contact us at the e-mail listed above.

If you are dissatisfied with the way the research is conducted, please contact the principal investigator in the first instance: 07487659602. If you feel the problem has not been resolved please contact the secretary to the Faculty of Health and Human Sciences Ethics Committee: Ms Sarah Jones 01752 585339.

I have read and understood the information about the research
I have had the chance to find out more about the study if I wished to.
I know what my part will be in the study and I know how long it will take.
I have been told if there are any possible risks.
I understand that personal information is strictly confidential
I freely consent to be a participant in the study. No one has put pressure on me.
I know that I can stop taking part in the study at any time.
Refusal to take part will make no difference to my university studies.
I know that if there are any problems I can contact the researchers listed above.

Under these circumstances, I agree to participate in the research.

Signature: .....

Date: .....

## C.2 Debrief.

Thank you very much for participating in this study. Now I would like to inform you in more detail about the study.

In this study we are interested in how many shapes people report they are able to draw without lifting their pen, and how this is affected by their values. We also plan to conduct this study in the UK and Saudi Arabia to be able to compare responses.

You completed four different questionnaires. These questionnaires measured (1) your moral values, (2) your general values, (3) your personal values, and (4) your cultural values. We are interested in how these values are related to how many shapes you reported you are able to draw.

You were also presented with two creative solutions tasks. In one task you had to find novel uses for everyday objects. We will count how many novel solutions you found in this task. “Novelty” in this task is defined as a solution that not many people have come up with in previous applications of the task.

In the other task, you were presented with 8 shapes and were asked to re-draw as many of these shapes without lifting your pen. Some of these shapes were doable, that is, you could draw them without lifting your pen, and some were not doable, that is you could not draw them without lifting the pen. We will count how many shapes you considered doable.

We are first interested in the relationship between the number of shapes you reported you could draw and the “finding novel uses for every-day objects” task. We expect that people who report being able to draw more shapes will also report more novel uses for everyday objects.

Second, we are interested in the relationship between values and the reported number of drawing shapes. We expect that certain values, for example, competitiveness or being open-minded, are positively related to the reported number of drawn shapes.

I want to remind you that you have the right to withdraw from the study at any time during and after the study and the data will be destroyed and will not be used for analysis. I also want to remind you that all your responses in the task are confidential. Furthermore, because two different experimenters ran the two different parts of the experiment, they do not know how your responses in these two parts of the experiment are related.

If you have any questions please feel free to ask the experimenter now.

In case you have any questions at a later point in time please feel free to contact the experimenter.

If you are dissatisfied with the way the research is conducted, please contact the principal investigator in the first instance: 07487659602. If you feel the problem has not been resolved please contact the secretary to the Faculty of Health and Human Sciences Ethics Committee: Mrs Sarah Jones 01752 585 339.

Thank you again for your participation and have a nice day.

Azizah Alqahtani, [azizah.alqahtani@plymouth.ac.uk](mailto:azizah.alqahtani@plymouth.ac.uk)

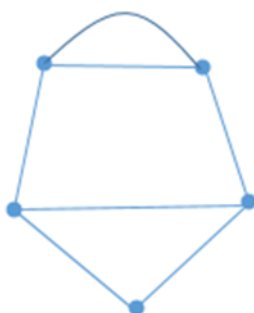
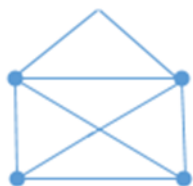
Michaela Gummerum, [michaela.gummerum@plymouth.ac.uk](mailto:michaela.gummerum@plymouth.ac.uk)



C.3 honesty tasks.

Task 1

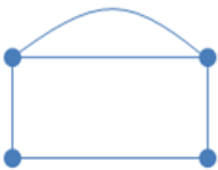
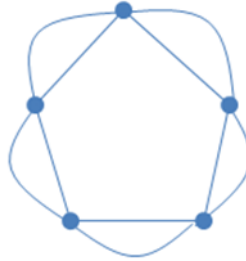
Below there are 8 shapes, try to draw them without lifting the pen or retrace them. Some shapes are not doable. You will be paid 0.50 p for each draw you do. You have 5 minutes to redraw them.



Please write the number of shapes you have done:

## Task 2

Below there are 6 shapes, try to draw them without lifting the pen or retrace them. Some shapes are not doable. You will be paid 0.50 p for each draw you do. You have 4 minutes to redraw them.



Please write the number of shapes you have done:

#### C.4 questionnaires of study 3.

Age:

Nationality:

Gender:

Instructions: Try to imagine *actually doing* the following things, and indicate how much money someone would have to pay you, (anonymously and secretly) to be willing to do each thing. For each action, assume that nothing bad would happen to you afterwards. Also assume that you cannot use the money to make up for your action.

No.	items	\$0 (I'd do it for free)	\$10	\$100	\$1000	\$10,000	\$100,000	a million dollars	never for any amount of money
	Kick a dog in the head, hard								
	Say no to a friend's request to help him move into a new apartment, after he helped you move the month before								
	Say something bad about your nation (which you don't believe to be true) while calling in, anonymously, to a talk-radio show in a foreign nation								
	Curse your parents, to their face. (You can apologize and explain one year later)								
	Sign a piece of paper that says "I hereby sell my soul, after my death, to whoever has this piece of paper"								
	Shoot and kill an animal that is a member of an endangered species								
	Throw out a box of ballots, during an election, to help your favored candidate win								
	Break off all communications with your immediate and extended family for 1 year								
	Make a disrespectful hand gesture to your boss, teacher, or professor								

	Get plastic surgery that adds a 2 inch tail on to the end of your spine (you can remove it in three years)								
	Make cruel remarks to an overweight person about his or her appearance								
	Sign a secret-but-binding pledge to only hire people of your race in your company								
	Burn your country's flag, in private (nobody else sees you)								
	Throw a rotten tomato at a political leader you dislike. (remember, you will not get caught)								
	Get a blood transfusion of 1 pint of disease-free, compatible blood from a convicted child molester								
	Stick a pin into the palm of a child you don't know								
	Steal from a poor person and use the money to buy a gift for a rich person								
	Leave the social group, club, or team that you most value								
	Slap your father in the face (with his permission) as part of a comedy skit								
	Attend a performance art piece in which all participants (including you) have to act like animals for 30 minutes, including crawling around naked and urinating on stage								

### General values.

Instructions: The following 14 value pairs are not necessarily opposites; they may express complementary tendencies under some circumstances. Please indicate your own personal values. Rating a value with an answer of (2) indicates „clearly more important than the other value“, an answer of (1) indicates „tends to be preferred over the other“ and (0) indicates equal weight for both values. Please make only one mark in each row.

EQUALITY	2 1 0 1 2	AUTHORITY
(equal opportunity for all)		(the right to lead or command)
SOCIAL POWER	2 1 0 1 2	SOCIAL JUSTICE
(control over others, dominance)		(correcting injustices, care for the weak)
SOCIAL ORDER	2 1 0 1 2	EXCITING LIFE
(stability of society)		(stimulating experiences)
WEALTH	2 1 0 1 2	UNITY WITH NATURE
(material possessions, money)		(fitting into nature)
POLITENESS	2 1 0 1 2	CREATIVITY
(courtesy, good manners)		(uniqueness, imagination)
ENJOYING LIFE	2 1 0 1 2	A WORLD AT PEACE
(fulfilment of wishes)		(free of war and conflict)
BROAD-MINDED	2 1 0 1 2	PRESERVING PUBLIC IMAGE
(tolerant of different ideas and beliefs)		(protecting face)
HUMBLE	2 1 0 1 2	INFLUENCIAL
(modest, self-effacing)		(having an impact on people and events)
HONEST	2 1 0 1 2	SUCCESSFUL
(genuine, sincere)		(achieving goals)
ENJOYING LIFE	2 1 0 1 2	DEVOUT
(enjoying food, sex, leisure, etc.)		(holding to religious faith and belief)

RESPECT FOR TRADITION	2	1	0	1	2	A VARIED LIFE
(preservation of time-honoured customs)						(filled with challenge, novelty, and change)
DARING	2	1	0	1	2	OBEDIENT
(seeking adventure, risk)						(dutiful, meeting obligations)
CHOOSING OWN GOALS	2	1	0	1	2	HONORING OF PARENTS AND ELDERS
(selecting own purposes)						(showing respect)
OPENNESS	2	1	0	1	2	CONTROL OVER UNCERTAINTY
(cosmopolitan orientation, advocate of diversity)						(control over events and their development)

### Personal values.

Each question describes a quality or characteristic that a person might have. Each quality is described with two words. We would like to know how much each of these qualities describes *yourself* and the *kind of person* you are. For example, if a quality listed is a really central or important part of you without which you would not be you, then you would answer “**extremely important to me**”. If a quality listed seems like a nice or good quality, but it isn’t a central or important part of you, then you would answer “**not important to me**”. Please try to use a variety of different answers to show us which qualities are **extremely important to you**, which are **very important to you**, which are **a little important to you**, and which are **not important to you**.

How important is it to you that you are creative or imaginative?

Extremely	very	a little	not
Important	important	important	important
to me	to me	to me	to me

How important is it to you that you are considerate or courteous?

Extremely	very	a little	not
Important	important	important	important
to me	to me	to me	to me

How important is it to you that you are hard-working or industrious?

Extremely	very	a little	not
Important	important	important	important
to me	to me	to me	to me

How important is it to you that you are honest or truthful?

Extremely	very	a little	not
Important	important	important	important
to me	to me	to me	to me

How important is it to you that you are outgoing or sociable?

Extremely	very	a little	not
Important	important	important	important
to me	to me	to me	to me

How important is it to you that you are kind or helpful?

Extremely	very	a little	not
Important	important	important	important
to me	to me	to me	to me

How important is it to you that you are athletic or agile?

Extremely	very	a little	not
Important	important	important	important
to me	to me	to me	to me

How important is it to you that you are understanding or sympathetic?

Extremely	very	a little	not
Important	important	important	important
to me	to me	to me	to me

How important is it to you that you are funny or humorous?

Extremely	very	a little	not
Important	important	important	important
to me	to me	to me	to me

How important is it to you that you are generous or giving?

Extremely	very	a little	not
Important	important	important	important
to me	to me	to me	to me

How important is it to you that you are logical or rational?

Extremely	very	a little	not
Important	important	important	important
to me	to me	to me	to me

How important is it to you that you are sincere or genuine?

Extremely	very	a little	not
Important	important	important	important
to me	to me	to me	to me

How important is it to you that you are independent or self-reliant?

Extremely	very	a little	not
Important	important	important	important
to me	to me	to me	to me

How important is it to you that you are fair or just?

Extremely	very	a little	not
Important	important	important	important
to me	to me	to me	to me

How important is it to you that you are active or energetic?

Extremely	very	a little	not
Important	important	important	important
to me	to me	to me	to me

How important is it to you that you are responsible or dependable?

Extremely	very	a little	not
Important	important	important	important
to me	to me	to me	to me

## Values Survey Model

Please think of an ideal job, disregarding your present job, if you have one. In choosing an ideal job, how important would it be to you to ... (please circle one answer in each line across):

1 = of utmost importance

2 = very important

3 = of moderate importance

4 = of little importance

5 = of very little or no importance

01. have sufficient time for your personal or home life	1	2	3	4	5
02. have a boss (direct superior) you can respect	1	2	3	4	5
03. get recognition for good performance	1	2	3	4	5
04. have security of employment	1	2	3	4	5
05. have pleasant people to work with	1	2	3	4	5
06. do work that is interesting	1	2	3	4	5
07. be consulted by your boss in decisions involving your work	1	2	3	4	5
08. live in a desirable area	1	2	3	4	5
09. have a job respected by your family and friends	1	2	3	4	5
10. have chances for promotion	1	2	3	4	5



In your private life, how important is each of the following to you: (please circle one answer in each line across):

- |  |   |   |   |   |   |
|--|---|---|---|---|---|
| 11. keeping time free for fun              | 1 | 2 | 3 | 4 | 5 |
| 12. moderation: having few desires         | 1 | 2 | 3 | 4 | 5 |
| 13. doing a service to a friend            | 1 | 2 | 3 | 4 | 5 |
| 14. thrift (not spending more than needed) | 1 | 2 | 3 | 4 | 5 |

15. How often do you feel nervous or tense?

1. always
2. usually
3. sometimes
4. seldom
5. never

16. Are you a happy person ?

1. always
2. usually
3. sometimes
4. seldom
5. never

17. Do other people or circumstances ever prevent you from doing what you really want to?

1. yes, always
2. yes, usually
3. sometimes
4. no, seldom
5. no, never

18. All in all, how would you describe your state of health these days?

1. very good
2. good
3. fair
4. poor
5. very poor

19. How proud are you to be a citizen of your country?

very proud

fairly proud

91 somewhat proud

not very proud

not proud at all

20. How often, in your experience, are subordinates afraid to contradict their boss (or students their teacher?)

1. never
2. seldom
3. sometimes
4. usually
5. always

To what extent do you agree or disagree with each of the following statements? (please circle one answer in each line across):

1 = strongly agree

2 = agree

3 = undecided

4 = disagree

5 = strongly disagree

21. One can be a good manager without having a precise answer to every question that a subordinate may raise about his or her work

1      2      3      4      5

22. Persistent efforts are the surest way to results

1      2      3      4      5

23. An organization structure in which certain subordinates have two bosses should be avoided at all cost

1      2      3      4      5

24. A company's or organization's rules should not be broken - not even when the employee thinks breaking the rule would be in the organization's best interest

1      2      3      4      5

Participants consent form, debrief, and questionnaires for study 4.

D.1 consent form.

## UNIVERSITY OF PLYMOUTH

### FACULTY OF HEALTH AND HUMAN SCIENCES

#### Human Ethics Committee Consent Form

#### CONSENT TO PARTICIPATE IN RESEARCH PROJECT

Azizah Alqahtani, [azizah.alqahtani@plymouth.ac.uk](mailto:azizah.alqahtani@plymouth.ac.uk)

Michaela Gummerum, [michaela.gummerum@plymouth.ac.uk](mailto:michaela.gummerum@plymouth.ac.uk)

#### Emotional reactions to interpersonal situations

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##### What is the study about?

This study examines how people classify different interpersonal situations and their emotional evaluations of these situations. We plan to conduct this study in both the UK and Saudi Arabia to be able to compare responses across cultures and whether people's choices are affected by cultural differences.

##### Why am I being approached?

You have been approached to participate in this study, because you signed up for the School of Psychology Participant Pool.

**What will happen during the study?**

You will be presented with 40 short descriptions of interactions between people. First, we would like to ask you to classify these 40 situations into groups. We then would like to know what emotions you ascribe to these different situations. Both these tasks will be presented to you on a computer.

In addition, we will ask you some demographic information, such as you age, gender, and country of residence.

This study will take no longer than 30 minutes.

**Do I have to take part?**

Your participation is completely voluntary. There are no known risks for the participants of this study.

**Can I withdraw?**

You can withdraw at any time without any penalty.

**Will it affect my relationship with the University?**

If you are a student at Plymouth University, this research is separate from any assessments. Research participation and performance does not relate to any of your assessments. You can withdraw at any time, without affecting your relationship with the University.

**Is the information collected confidential?**

All information obtained in this study will be kept strictly confidential. All answers will be recorded on a computer. Only the investigator will have access to this data. All data will be destroyed ten years after publication of the results of this study.

**Will I be identifiable in any way?**

All participants will create a personal identification number. All decisions and answers in the questionnaire can be traced only to this personal identification number and not to the participant.

**Who can I contact for further information?**

If you have any questions about this study, please do not hesitate to contact us at the e-mail listed above.

If you are dissatisfied with the way the research is conducted, please contact the principal investigator in the first instance: 07487659602. If you feel the problem has not been resolved please contact the secretary to the Faculty of Health and Human Sciences Ethics Committee: Ms Sarah Jones 01752 585339.

I have read and understood the information about the research
I have had the chance to find out more about the study if I wished to.
I know what my part will be in the study and I know how long it will take.
I have been told if there are any possible risks.
I understand that personal information is strictly confidential
I freely consent to be a participant in the study. No one has put pressure on me.
I know that I can stop taking part in the study at any time.
Refusal to take part will make no difference to my university studies.
I know that if there are any problems I can contact the researchers listed above.

Under these circumstances, I agree to participate in the research.

Name: .....

Signature: .....

Date: .....

## D.2 Debrief.

Thank you very much for participating in this study.

Now we would like to inform you in more detail about the study.

In this study the researcher interested in determining the relationship between emotions and moral judgment.

To that end you were presented with a 40 interpersonal situations which potentially depicted moral transgressions. You were asked to classify these 40 situations grouping the similar situations into one class. We then asked you to rate these situations based on different moral emotions.

Previous research indicated that there is a relationship between moral judgment and certain emotions. Rozin et al. (1999) concluded that certain emotions such as contempt, anger, and disgust are triggered when violations of three moral ethics occurred. Specifically, these researchers stated that violations of individual rights are associated with anger, that violations of communal rights are associated with contempt, and that violations of purity are associated with disgust. The aim of this study is to investigate this question in a cross-cultural context, comparing adults in the Middle East and in Europe.

If you have any questions concerning this research please contact the principle investigator, [Azizah Alqahtani](mailto:azizah.alqahtani@plymouth.ac.uk), [azizah.alqahtani@plymouth.ac.uk](mailto:azizah.alqahtani@plymouth.ac.uk). We would also like to remind you that you have the right to withdraw from the study even after you completed it. To do so, please email the principle investigator with your Personal ID code after which all data associated with this ID code will be deleted.

If you are dissatisfied with the way the research is conducted, please contact the principal investigator in the first instance. If you feel the problem has not been resolved please contact the secretary to the Faculty of Health and Human Sciences Ethics Committee, Ms Sarah Jones, [sarah.c.jones@plymouth.ac.uk](mailto:sarah.c.jones@plymouth.ac.uk).

Thank you again for your participation and have a nice day.

### D.3 questionnaires of study 4.

Date of birth:

(day/month/year)

Gender:

Nationality:

It has been proposed that when we observe others and make moral judgments about others' actions, we classify their actions into five different categories, also called moral foundations. These moral foundations are supposed to be universal across cultures.

Here is a description of these five moral foundations:

**Harm foundation:** The harm/care foundation is related to disapproving and avoiding pain and misery in others. It is based on cherishing and protecting others (especially those more vulnerable than us) and on opposing harm.

**Justice foundation:** The justice foundation is related to equality and justice and seeks that these principles not being violated. That is, the justice foundation is about promoting justice according to shared rules and opposing cheating.

**Ingroup foundation:** The ingroup foundation is related to upholding group relationships, group cohesion, and group well-being. That is, the ingroup foundation is about standing with your group, family, or nation and opposing the betrayal of important groups.

**Authority foundation:** The authority foundation is related to status differences between people and within societies. Subordinates are supposed to follow authorities' norms and rules, but authorities also have a duty to support the well-being of subordinates. Thus, the authority foundation is about submitting to tradition and legitimate authority and opposing subversion.

**Purity foundation:** The purity foundation is associated with biological and social contaminants. It underlies the widespread idea that the body is a temple which can be desecrated by immoral activities and contaminants. That is, the purity foundation is related to abhorrence for disgusting things, foods, and actions.

**On the next pages you will read short descriptions of actions. Carefully read each description and decide what moral foundation is being violated (from your point of view ).**

You observe a man kicking a dog in the head hardly.  
What kind of violation do you think this is?

Caring violation  
Justice violation  
Ingroup violation  
Authority violation  
Purity violation  
No violation

What emotions do you associate with this action?

Sadness  
Apathy  
Anger  
Guilt  
Contempt  
Shame  
Resentment  
Embarrassment  
Disgust

You observe a man saying no to his friend's request to help him move into a new apartment, after the friend helped him move the month before.  
What kind of violation do you think this is?

- Caring violation
- Justice violation
- Ingroup violation
- Authority violation
- Purity violation
- No violation

What emotions do you associate with this action?

Sadness  
Apathy  
Anger  
Guilt  
Contempt  
Shame  
Resentment  
Embarrassment  
Disgust

You observe a man burning up his country flag, in private (nobody else sees him).

What kind of violation do you think this is?

Caring violation

- Justice violation
- Ingroup violation
- Authority violation
- Purity violation
- No violation

What emotions do you associate with this action?

- Sadness
- Apathy
- Anger
- Guilt
- Contempt
- Shame
- Resentment
- Embarrassment
- Disgust

You hear a man cursing the founders or early heroes of his country (in private, nobody hears him).

What kind of violation do you think this is?

- Caring violation
- Justice violation
- Ingroup violation
- Authority violation
- Purity violation
- No violation

What emotions do you associate with this action?

- Sadness
- Apathy
- Anger
- Guilt
- Contempt
- Shame
- Resentment
- Embarrassment
- Disgust

You see a person eating a piece of rotten meat.

What kind of violation do you think this is?



- Caring violation
- Justice violation
- Ingroup violation
- Authority violation
- Purity violation
- No violation

What emotions do you associate with this action?

- Sadness
- Apathy
- Anger
- Guilt
- Contempt
- Shame
- Resentment
- Embarrassment
- Disgust

You observe a man who shooting and killing an animal that is a member of an endangered species.

What kind of violation do you think this is?

- Caring violation
- Justice violation
- Ingroup violation
- Authority violation
- Purity violation
- No violation

What emotions do you associate with this action?

- Sadness
- Apathy
- Anger
- Guilt
- Contempt
- Shame
- Resentment
- Embarrassment
- Disgust

You observe a man throwing out a box of ballots, during an election, to help your favoured candidate win.

What kind of violation do you think this is?

- Caring violation
- Justice violation
- Ingroup violation
- Authority violation

- Purity violation
- No violation

What emotions do you associate with this action?

- Sadness
- Apathy
- Anger
- Guilt
- Contempt
- Shame
- Resentment
- Embarrassment
- Disgust

You hear a man saying something bad about his country (which you don't believe to be true) while calling in, anonymously, to a talk-radio show in a foreign nation.

What kind of violation do you think this is?

- Caring violation
- Justice violation
- Ingroup violation
- Authority violation
- Purity violation
- No violation

What emotions do you associate with this action?

- Sadness
- Apathy
- Anger
- Guilt
- Contempt
- Shame
- Resentment
- Embarrassment
- Disgust

You see a man making a disrespectful hand gesture to his boss or teacher.

What kind of violation do you think this is?

- Caring violation
- Justice violation
- Ingroup violation
- Authority violation
- Purity violation
- No violation

What emotions do you associate with this action?

- Sadness
- Apathy
- Anger
- Guilt
- Contempt
- Shame
- Resentment
- Embarrassment
- Disgust

You observe a person touching a corpse.

What kind of violation do you think this is?

- Caring violation
- Justice violation
- Ingroup violation
- Authority violation
- Purity violation
- No violation

What emotions do you associate with this action?

- Sadness
- Apathy
- Anger
- Guilt
- Contempt
- Shame
- Resentment
- Embarrassment
- Disgust

You see and hear a woman making cruel remarks to an overweight person about her appearance.

What kind of violation do you think this is?

- Caring violation
- Justice violation
- Ingroup violation
- Authority violation
- Purity violation
- No violation

What emotions do you associate with this action?

- Sadness
- Apathy
- Anger
- Guilt
- Contempt
- Shame
- Resentment
- Embarrassment
- Disgust

You observe a boss signing a secret-but-binding pledge to only hire people of your nationality in your company.

What kind of violation do you think this is?

- Caring violation
- Justice violation
- Ingroup violation
- Authority violation
- Purity violation
- No violation

What emotions do you associate with this action?

- Sadness
- Apathy
- Anger
- Guilt
- Contempt
- Shame
- Resentment
- Embarrassment
- Disgust

You hear about a woman who breaks off all communications with her immediate and extended family for 1 year.

What kind of violation do you think this is?

- Caring violation
- Justice violation
- Ingroup violation
- Authority violation
- Purity violation
- No violation

What emotions do you associate with this action?

- Sadness
- Apathy
- Anger
- Guilt
- Contempt
- Shame
- Resentment
- Embarrassment
- Disgust

You observe a man who threw a rotten tomato at a political leader he dislikes (he was not caught).  
What kind of violation do you think this is?

- Caring violation
- Justice violation
- Ingroup violation
- Authority violation
- Purity violation
- No violation

What emotions do you associate with this action?

- Sadness
- Apathy
- Anger
- Guilt
- Contempt
- Shame
- Resentment
- Embarrassment
- Disgust

You observe someone who biting into an apple with a worm in it.  
What kind of violation do you think this is?

- Caring violation
- Justice violation
- Ingroup violation
- Authority violation
- Purity violation
- No violation

What emotions do you associate with this action?

- Sadness
- Apathy
- Anger
- Guilt
- Contempt
- Shame
- Resentment
- Embarrassment
- Disgust

You observe a teacher sticking a pin into the palm of a child you don't know.

What kind of violation do you think this is?

- Caring violation
- Justice violation
- Ingroup violation
- Authority violation
- Purity violation
- No violation

What emotions do you associate with this action?

- Sadness
- Apathy
- Anger
- Guilt
- Contempt
- Shame
- Resentment
- Embarrassment
- Disgust

You see someone who is edging ahead of another person in a long line.

What kind of violation do you think this is?

- Caring violation
- Justice violation
- Ingroup violation
- Authority violation
- Purity violation
- No violation

What emotions do you associate with this action?

- Sadness
- Apathy
- Anger
- Guilt
- Contempt
- Shame
- Resentment
- Embarrassment
- Disgust

You hear about a man who renounces his citizenship and becomes a citizen of another country.  
What kind of violation do you think this is?

- Caring violation
- Justice violation
- Ingroup violation
- Authority violation
- Purity violation
- No violation

What emotions do you associate with this action?

- Sadness
- Apathy
- Anger
- Guilt
- Contempt
- Shame
- Resentment
- Embarrassment
- Disgust

You hear a 10-year-old child say dirty words to his/her parents.  
What kind of violation do you think this is?

- Caring violation
- Justice violation
- Ingroup violation
- Authority violation
- Purity violation
- No violation

What emotions do you associate with this action?

- Sadness
- Apathy

- Anger
- Guilt
- Contempt
- Shame
- Resentment
- Embarrassment
- Disgust

You hear about a 70-year-old male who has sex with a 17-year-old female.  
What kind of violation do you think this is?

- Caring violation
- Justice violation
- Ingroup violation
- Authority violation
- Purity violation
- No violation

What emotions do you associate with this action?

- Sadness
- Apathy
- Anger
- Guilt
- Contempt
- Shame
- Resentment
- Embarrassment
- Disgust

You watch a person scolding a child who hit another child.  
What kind of violation do you think this is?

- Caring violation
- Justice violation
- Ingroup violation
- Authority violation
- Purity violation
- No violation

What emotions do you associate with this action?

- Sadness
- Apathy
- Anger
- Guilt



- Contempt
- Shame
- Resentment
- Embarrassment
- Disgust

You see someone stealing a purse from a blind person.  
What kind of violation do you think this is?

- Caring violation
- Justice violation
- Ingroup violation
- Authority violation
- Purity violation
- No violation

What emotions do you associate with this action?

- Sadness
- Apathy
- Anger
- Guilt
- Contempt
- Shame
- Resentment
- Embarrassment
- Disgust

You hear about a girl leaving the social group, club, or team that she most values.  
What kind of violation do you think this is?

- Caring violation
- Justice violation
- Ingroup violation
- Authority violation
- Purity violation
- No violation

What emotions do you associate with this action?

- Sadness
- Apathy
- Anger
- Guilt
- Contempt
- Shame

- Resentment
- Embarrassment
- Disgust

You observe a salesman addressing a customer by his/her first name after just meeting her/him.  
What kind of violation do you think this is?

- Caring violation
- Justice violation
- Ingroup violation
- Authority violation
- Purity violation
- No violation

What emotions do you associate with this action?

- Sadness
- Apathy
- Anger
- Guilt
- Contempt
- Shame
- Resentment
- Embarrassment
- Disgust

You watch a boy cooking and eating his dog, after it died of natural causes.  
What kind of violation do you think this is?

- Caring violation
- Justice violation
- Ingroup violation
- Authority violation
- Purity violation
- No violation

What emotions do you associate with this action?

- Sadness
- Apathy
- Anger
- Guilt
- Contempt
- Shame
- Resentment
- Embarrassment

- Disgust

You hear about a man who comes home drunk and beats his wife.  
What kind of violation do you think this is?

- Caring violation
- Justice violation
- Ingroup violation
- Authority violation
- Purity violation
- No violation

What emotions do you associate with this action?

- Sadness
- Apathy
- Anger
- Guilt
- Contempt
- Shame
- Resentment
- Embarrassment
- Disgust

You are being told that an acquaintance embezzled money from a bank.  
What kind of violation do you think this is?

- Caring violation
- Justice violation
- Ingroup violation
- Authority violation
- Purity violation
- No violation

What emotions do you associate with this action?

- Sadness
- Apathy
- Anger
- Guilt
- Contempt
- Shame
- Resentment
- Embarrassment
- Disgust

You see a teenager beginning to eat dinner before everyone else at the table is being served.

What kind of violation do you think this is?

- Caring violation
- Justice violation
- Ingroup violation
- Authority violation
- Purity violation
- No violation

What emotions do you associate with this action?

- Sadness
- Apathy
- Anger
- Guilt
- Contempt
- Shame
- Resentment
- Embarrassment
- Disgust

You see and hear an employee unjustifiably complain to his/her boss.

What kind of violation do you think this is?

- Caring violation
- Justice violation
- Ingroup violation
- Authority violation
- Purity violation
- No violation

What emotions do you associate with this action?

- Sadness
- Apathy
- Anger
- Guilt
- Contempt
- Shame
- Resentment
- Embarrassment
- Disgust

You hear about a woman who got a plastic surgery that adds a 2-inch tail to the end of her spine.

What kind of violation do you think this is?

- Caring violation
- Justice violation
- Ingroup violation
- Authority violation
- Purity violation
- No violation

What emotions do you associate with this action?

- Sadness
- Apathy
- Anger
- Guilt
- Contempt
- Shame
- Resentment
- Embarrassment
- Disgust

You hear about someone who put cyanide in a container of yogurt in a supermarket.  
What kind of violation do you think this is?

- Caring violation
- Justice violation
- Ingroup violation
- Authority violation
- Purity violation
- No violation

What emotions do you associate with this action?

- Sadness
- Apathy
- Anger
- Guilt
- Contempt
- Shame
- Resentment
- Embarrassment
- Disgust

You are being told that someone you know faked an injury after a car accident in order to collect insurance.  
What kind of violation do you think this is?

- Caring violation
- Justice violation

- Ingroup violation
- Authority violation
- Purity violation
- No violation

What emotions do you associate with this action?

- Sadness
- Apathy
- Anger
- Guilt
- Contempt
- Shame
- Resentment
- Embarrassment
- Disgust

You see a 16-year-old refuse to give up his/her seat on the bus to a crippled old lady.

What kind of violation do you think this is?

- Caring violation
- Justice violation
- Ingroup violation
- Authority violation
- Purity violation
- No violation

What emotions do you associate with this action?

- Sadness
- Apathy
- Anger
- Guilt
- Contempt
- Shame
- Resentment
- Embarrassment
- Disgust

You observe a cleaning person, who thinks no one is watching, sitting in the chair of the company president.

What kind of violation do you think this is?

- Caring violation
- Justice violation
- Ingroup violation

- Authority violation
- Purity violation
- No violation

What emotions do you associate with this action?

- Sadness
- Apathy
- Anger
- Guilt
- Contempt
- Shame
- Resentment
- Embarrassment
- Disgust

You observe a man getting a blood transfusion of 1 pint of disease-free, compatible blood from a convicted child molester.

What kind of violation do you think this is?

- Caring violation
- Justice violation
- Ingroup violation
- Authority violation
- Purity violation
- No violation

What emotions do you associate with this action?

- Sadness
- Apathy
- Anger
- Guilt
- Contempt
- Shame
- Resentment
- Embarrassment
- Disgust

You look at a picture of the inmates at a World War II concentration camp being led into the gas chamber by the Nazis.

What kind of violation do you think this is?

- Caring violation
- Justice violation
- Ingroup violation

- Authority violation
- Purity violation
- No violation

What emotions do you associate with this action?

- Sadness
- Apathy
- Anger
- Guilt
- Contempt
- Shame
- Resentment
- Embarrassment
- Disgust

You watch a non-smoker sitting near stranger who is smoking in the no-smoking section of a small waiting area.

What kind of violation do you think this is?

- Caring violation
- Justice violation
- Ingroup violation
- Authority violation
- Purity violation
- No violation

What emotions do you associate with this action?

- Sadness
- Apathy
- Anger
- Guilt
- Contempt
- Shame
- Resentment
- Embarrassment
- Disgust

You hear about someone who doesn't go to his/ her own mother's funeral.

What kind of violation do you think this is?

- Caring violation
- Justice violation
- Ingroup violation
- Authority violation



- Purity violation
- No violation

What emotions do you associate with this action?

- Sadness
- Apathy
- Anger
- Guilt
- Contempt
- Shame
- Resentment
- Embarrassment
- Disgust

You see and hear an employer scold someone on his/her staff who regularly leaves work an hour early when no one else is around.

What kind of violation do you think this is?

- Caring violation
- Justice violation
- Ingroup violation
- Authority violation
- Purity violation
- No violation

What emotions do you associate with this action?

- Sadness
- Apathy
- Anger
- Guilt
- Contempt
- Shame
- Resentment
- Embarrassment
- Disgust

You see a performance of art piece in which a man and all participants have to act like animals for 30 minutes, including crawling around naked and urinating on stage.

What kind of violation do you think this is?

- Caring violation
- Justice violation
- Ingroup violation
- Authority violation
- Purity violation
- No violation

What emotions do you associate with this action?

- Sadness
- Apathy
- Anger
- Guilt
- Contempt
- Shame
- Resentment
- Embarrassment
- Disgust

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